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CHIPPING NORTON POST OFFICE AND TELEPHONE EXCHANGE.

MR. H. E. SECCOMBE, A.R.I.B.A. (H.M. Office of Works), Architect. (See page 862.)

MEETINGS

FRIDAY, *December* 1.

Institution of Sanitary Engineers. Annual Dinner. At the Abercorn Rooms, Great Eastern Hotel, E.C.2. 6.45 p.m.

FRIDAY AND SATURDAY, *December* 1 *and* 2.

Royal Sanitary Institute. Sessional Meeting at Municipal Annexe, Liverpool. Friday: Discussions on "Housing and Slum Clearance," to be opened by Dr. W. M. Frazer. Saturday: Visits to Clearance Areas, a Housing Estate, a Children's Hospital, and to Liverpool Cathedral.

SATURDAY, *December* 2.

London Association of Builders' Foremen and Clerks of Works. Annual Dinner. At Cannon-street Hotel, E.C. 6.30. p.m.

MONDAY, *December* 4.

Royal Institute of British Architects. Mr. C. Marriott on "Contemporary London Buildings." Presentation of the London Architectural Medal and Diploma for 1932 to Messrs. Sir John Burnet & Partners and Messrs. Campbell Jones, Sons & Smithers. 8 p.m.

Society of Engineers. Mr. H. Kaylor on "Reinforced Concrete: Its Application to Modern Housing." At Burlington House, W.1. 6 p.m.

Chartered Surveyors' Institution. Mr. H. F. Bidder on "The Law Relating to Electricity Supply." 8 p.m.

Architecture Club. Discussion on "Are We Tinkering with the Slum Problem?" At 34, Bedford-square. 8.30 p.m.

TUESDAY, *December* 5.

Chadwick Public Lectures. Mr. J. H. Coste on "Rural Sanitation." At the Institution of Mechanical Engineers, Storey's Gate, St. James's Park, Westminster. 8 p.m.

WEDNESDAY, *December* 6.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "French Mediæval Architecture: II." 6 p.m.

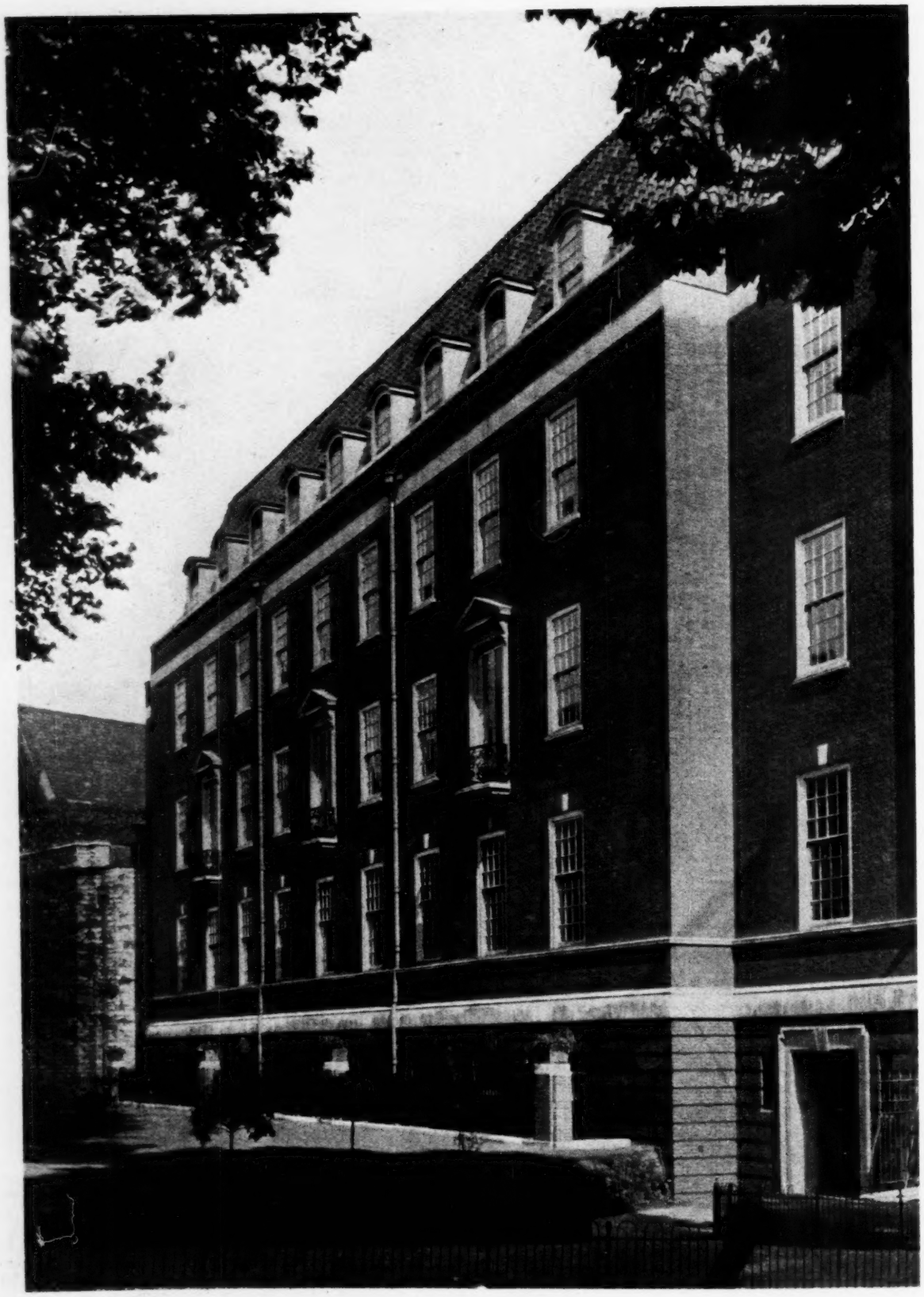
Institution of Heating and Ventilating Engineers. Mr. W. P. Ollett on "Unit Heaters." 7 p.m.

THURSDAY, *December* 7.

London Master Builders' Association. Annual Dinner. At the Connaught Rooms, W.C.2. 7 p.m.

Auctioneers' and Estate Agents' Institute. Mr. Montagu Evans on "The Rent, etc., Act, 1933, from the Point of View of the Profession." 7 p.m.

Institution of Structural Engineers (Yorkshire Branch). Mr. J. Singleton-Green on "Properties of Concrete—a Summary of Present-day Information." At Leeds. 7 p.m.



MAYFAIR TELEPHONE EXCHANGE.

MR. P. K. HANTON, O.B.E., A.R.I.B.A. (H.M. Office of Works), Architect.

THE COUNTRY PRACTICE

IN an endeavour to encourage the building of the smaller type of house, in which a shortage developed both before and during the War, there has been a tendency with local authorities, building societies, and banks to remove as many obstacles as possible from the way of the speculative builder. Many of the enterprises in this field have thus commenced on very slight documentary evidence in the way of plans and specification, while responsible supervision has, in many cases, been remarkable for its absence. The success of the general endeavours to solve an acute problem makes one reluctant to say that there has been some error in the direction of laxity.

Architects, rightly, measure their success by the state of the building industry, and it is unfortunate for them that the branch of that industry which has received the maximum of artificial stimulus should be one in which their services are seldom sought. If there are any just grounds for fearing that the average manner of building in the speculative field is such as to pile up trouble in the future, then we should feel entirely justified in stating that the exclusion of the architect from a wide field of building activity has had a deplorable effect which can be corrected by restoring the profession to its rightful place.

We have our own opinions upon this matter, but we are quite certain that it would be impossible to convert the public to a view that would give entire satisfaction to the profession. We do, however, believe that on a smaller scale, a better understanding of the services the architect has to offer might be kindled, with advantage to the public, as well as a stimulus to the country practice, which has suffered so many inroads into its legitimate field.

So far as the local authorities are concerned, the deposit of plans with notice of intention to build is the almost universal rule. These plans must be useful or otherwise, and the continuance of the rule must lead us to conclude that they are the former. Their usefulness has, from the outset, been twofold, and has recently become threefold. In the first place, a deposited plan should be an accurate record of a building enterprise, from which the maps and records of the district may be kept accurately up to date, with the manner of drainage, outline of the building block, and its method of construction recorded. Secondly, it should be a record of intention from which the authority may judge in advance whether the by-laws will be observed, without waiting for a building to be completed in error, and amended by expensive alterations. The third and recent purpose to which plans may be put is to judge in advance the elevational treatment, powers to approve or reject which may now be adopted by any local authority.

It must be obvious that all these technical requirements can best be provided by the trained architect, and that if local authorities demanded that these records should usefully serve these purposes, there would be a general tendency to make fuller use of the architect's establishment. We suggest that the local authorities should resist any misguided inclinations to accept unsatisfactory documents as deposited plans just as they would refuse any home-made agreement in dealing with a legal situation.

The building societies have also done much to stimulate the housing market; yet they would be the first to agree as to the paramount importance of real values in property standing as security for mortgage. We have a shrewd suspicion that not a few of the properties upon which generous advances have been made, will stand for a very depreciated valuation if put on the market in a few years time. We know, also, that the house of good appearance and sound construction, such as an architect can design and supervise, is likely to retain a stable value for much longer than one of similar size, indifferent in appearance and construction. We should be happy to see that building society valuations recognised fully these facts, and gave preference to the house built under architectural control.

Very much the same could be said of the banks, who have provided the temporary finance with which many a speculator has started operations. The average country manager is well alive to the fact, but we have yet to know that specific headquarter's instructions have been issued to recognise this difference in values. By facing these facts, both the building societies and the banks could not only secure their own positions, but call attention to the existence of values to which the average member of the public remains largely indifferent.

We would also draw attention to the services which an architect can usefully offer in buying and selling houses and property. The nature and construction of a house is frequently a mystery to the average man or woman, who is apt to be more impressed by a cased-in bath and chromium taps than by the quality of a damp-course or the construction of roofs or flashings. The purchaser who risks these matters without technical assurance is buying trouble, for which he may pay ten or twenty times the cost of a professional fee for which he might originally have purchased safety. When the number of properties which change hands in the course of a year in the average small town is considered, the amount of business of this type which passes through the architect's hands is surprisingly small. Yet the good sense of extending this form of business intercourse between architect and public must surely be obvious.

The country practitioner has certainly seen his field of supremacy narrowed down in recent years. With the Post Offices and Telephone Exchanges carried out by the Office of Works; the schools by the County Architect; the shop alterations by firms of shopfitters; the municipal housing schemes by the local building surveyor; the houses by builders and casual draughtsmen; the remaining field within which the country architect must operate to earn his living becomes more and more restricted. If there are any directions in which some compensating factor may be sought, there may be some hope for more stable and satisfactory conditions.

We have suggested one or two directions in which architectural services might be encouraged without running our heads against the rooted objections of the public. The latter is more often ignorant than unreasonable, and it is more often the inertia with which that ignorance is faced than failure to carry the point by argument that has brought about a state of affairs that is unsatisfactory from all points of view. We venture to press the common sense of the matter in the conviction that it will carry some weight with those who have minds open for improvement.

No class in the profession has shown a more marked improvement in all ways than the architects of the country towns, who now represent possibly a majority in the profession. To improve their conditions of working would be no mean step in the general advancement of the profession, and an advance in the humbler walks of life is apt to carry a buoyant superstructure with it, and ultimately achieves marked successes in the higher places. On the other hand, preoccupation with the more showy side of a question is apt to stop at the individual success.

NOTES

Unemployment and the Craftsman.

At a time when the employment of students leaving the various schools is a matter of so much concern and a problem so difficult of solution, it is surely a very mistaken view, though one being expressed, that money should not be spent in this direction. Without going into the deeper reasons why the arts should be encouraged, one may ask why unemployment—a matter of grave concern as regards the unskilled—should be a matter of indifference in the case of the more skilled worker? For what is the use of large grants to promote the education of the craftsman when it is suggested at the same time that money should not be spent to secure his future employment? Is the trained craftsman without work not to count—the woodworker, the glazier, the designer and the skilled craftsman in various materials; surely amongst those suffering from unemployment they should not be disregarded lest their finer skill should be lost to us? This is robbing Peter to pay Paul, yet this prohibition is making itself felt because it sounds plausible until its implications are investigated. Take the case of architecture or of the crafts; in a single stained-glass window there is employment for the glass manufacturer, the lead merchant, the glazier, the kiln worker, right through to the coal which has to be drawn from the pits for the purpose. If we lay it down that we should add to unemployment by deflecting employment from the skilled worker, so impoverishing to our civilisation, we are surely making a great mistake.

The Economy Policy of the Government.

We are glad to read some observations in the issue of *The Economist* for November 25 on the "economy" ban of the Government on public works, as they corroborate what has so often been urged in our columns. In an article on "Crisis and Recovery" our contemporary says: "Neither this nor any other Government could have any reason or excuse for delaying any longer in adopting an expansionist policy at home. It is absurd to pretend that public work schemes are not being undertaken because none exist; for the instance of the Elephant and Castle scheme . . . shows that the Government is still exercising a positive ban on productive investment of this kind. And, above all, in persisting in its obstinate refusal to adopt an effectively co-ordinated housing and slum-clearance policy, the Government is ignoring at one and the same time the advice of housing experts, the crying need of the slum-dwellers, and the demand of almost all expert economic opinion for positive monetary expansion. . . . When a Government's financial credit is high, and prices and production are definitely on the turn, there is good reason to expect such measures to succeed and little ground for thinking that they will have disadvantageous secondary effects. Even if there were valid arguments against a forward policy in 1931, they are certainly invalid to-day. Yet there is nothing in the King's Speech to suggest that the Government has yet realised this fundamental change. While the crisis is over and the depression remains, the Government apparently prefers to retain its belief in the crisis and complacently to ignore the depression."

Glasgow Corporation and Architectural Work.

A dignified and pertinent letter by the Secretary of the Glasgow Institute of Architects, Mr. William MacLean, recently appeared in the *Glasgow Herald* in reference to the decision of the Corporation that the City Engineer's Department is to be entrusted with designing two large architectural schemes, *i.e.*, a new infectious diseases hospital at Cowglen and the extensions to Hawkhead Mental Hospital. The writer points out that his Institute includes in its membership architects in the employment of the Corporation as well as private practising architects, and is not only concerned with, but is prepared to support, the interests of both; but he challenges the statement made by a member of the Corporation that "the architects of the Master of Works' Department have a better knowledge of the requirements in hospital construction than any other architects in the city." Mr. MacLean has no difficulty in disposing of this and other statements, which are certainly a slight on the private architects of the City, and could never have been made had the speaker better understood the subject. Unfortunately, such statements are too often made by people in responsible positions and the public are inclined to accept them because of the assurance with which they are made. In the course of his convincing letter, Mr. MacLean says "It cannot be emphasised too greatly that these decisions are of the gravest importance to the members of the architectural profession in Glasgow, who are citizens and ratepayers, and entitled to expect that some, at least, of the public work shall be placed in their hands, either directly or by competition, but the interests of the public are also gravely affected."

Town Halls: A Point in Planning.

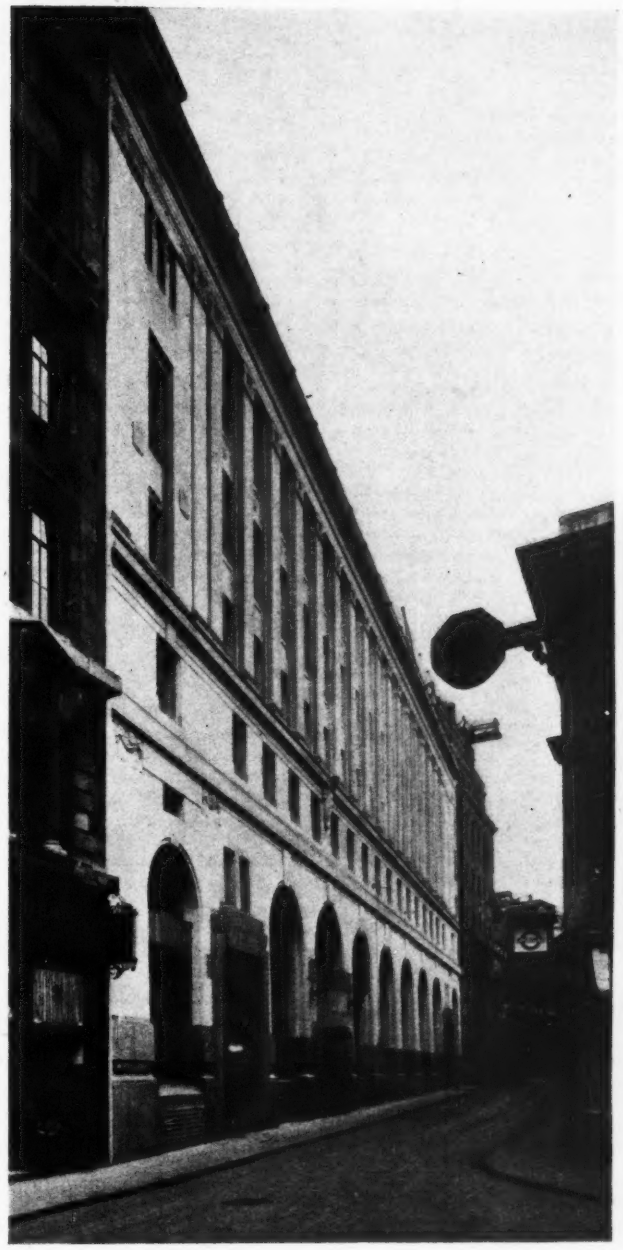
An interesting point in the planning of town halls is raised by a correspondent, who writes as follows: "It is becoming increasingly recognised by many of our local authorities who have recently built new town halls that their conception of the uses which these buildings would be called upon to serve, and consequently the nature of the accommodation to be provided, has been rather wide of the mark. Many of these new buildings have been de-

THE GRASSHOPPER INN, TATSFIELD. From a Drawing by MR. ARTHUR KEEN, F.R.I.B.A.

signed almost exclusively for concerts, theatrical performances and public meetings, but in practice it is found that they are used mainly for dances. There is a new hall in a south-western suburb of London in which nine lettings out of ten are for dances. It has been found, therefore, that the building is inadequate for its main purpose. At these dances it is quite a common thing for seven or eight hundred persons to be present, and there is a heavy demand for refreshments. The extraordinary thing is that no provision has been made for catering, and, consequently, the stage, which should be occupied by the band, has to be given over to this purpose, and a draughty corridor connecting the hall with the municipal offices, is also pressed into service. It is not suggested that this oversight in planning is the fault of the architects, who simply complied with the schedule of accommodation laid down. The point is one of considerable importance to local authorities, and should be noted by the Competitions Committee of the R.I.B.A., who might advise the assessors they appoint to adjudicate in town hall competitions of the importance of the catering element in these buildings."

Vision in Architecture.

We published in our issue of the 3rd ult. a report of the thoughtful and suggestive address by the President, Mr. C. Lovett Gill, F.R.I.B.A., in the course of which he considered the question of specialisation for architects, which question is the subject of *The Builder* debate published on page 860 this week. In the following discussion on the address some excellent speeches were made, particularly that by Prof. Beresford Pite, who, in referring to the need for an Idea and Vision in architectural design, said: "Let me at once suggest to you that it is no Idea to be successful; it is no Vision to have a large practice; it is no Vision to be a specialist. That is not Vision at all, it is a low form of ambition! You have embarked upon a profession which has greatness and power, in which you can become a great architect, in which you can have a great influence and in which, although it almost appears humorous, other people have to provide the means for you to express your vision. You have not to pay for it; somebody else has to do that! Have you got Vision? What department of this School is the department of Vision?" Vision, he added, "is the divine sense of making things beautiful, of lifting things above the ordinary level. It is the divine gift of elevating the ordinary into the extraordinary, of elevating the true into the beautiful, of adding something, of literally putting into the work which you have in hand something which is not there and which you have got to supply, something of yourself, your personality, your vision, your idea. . . . That is your job in life; I put it to you as students that it is your job in life to get a vision, to have an idea. Whatever you do, do not let that idea be overlaid by the notion of success, which is something quite different." We welcome such stimulating words, addressed as they were to a body of young architects, and we are sure the speaker did not wish to imply that the notion of success is in itself unworthy.



LLOYDS BANK HEADQUARTERS, E.C.: Lombard Street Frontage.

SIR JOHN BURNET, TAIT AND LORNE, with MESSRS. CAMPBELL JONES, SONS, AND SMITHERS, Associated Architects.

The R.I.B.A. Architecture Medal for 1932 will be presented to the architects for this building on Monday next, December 4, at the R.I.B.A. premises.

The Late Anning Bell, R.A.

We announce with regret the death of Mr. Anning Bell, R.A., at the age of seventy. Mr. Anning Bell was elected an A.R.A. in 1914 and a full R.A. in 1922. He was a decorative artist of considerable merit and his work always possessed distinctive decorative qualities. For many years specimens of his work have appeared in our pages, notably his cartoons for stained glass, examples of which completed works may be seen in the Manchester Reference Library and elsewhere. Most of the large public galleries, including the National Gallery of British Art, possess examples of his painting. In addition to painting and stained glass, he frequently worked in conjunction with architects, as when he filled the tympanum over the entrance to the Roman Catholic Cathedral at Westminster, designed by Bentley, with a mosiac design. Mr. Anning Bell was also responsible for mosaic in the Houses of Parliament and much other work of a decorative character.

GENERAL NEWS

Professional Announcement.

Messrs. Macfarlane and Wilson, architects and surveyors, have opened an office at 1, Woodstock-avenue, Lanark, and would be pleased to receive trade catalogues of modern fittings, etc., for houses and bungalows.

An Architect's Estate.

Mr. T. H. Nowell Parr, of Kingston Hill, Surrey, architect and surveyor (net personalty £18,296), left £27,722.

Sir John Tudor Walters's Estate.

The Rt. Hon. Sir John Tudor Walters, P.C., of Hobart-place, and Princes-gate, S.W., who died on July 16, aged 65, left estate of the gross value of £43,670, with net personalty £19,933.

Calendar of University College, London.

The Calendar of University College, University of London, for the new session, is now issued. It contains details of the whole of the activities of the College and includes full reference to the Bartlett School of Architecture.

Royal Sanitary Institute Congress.

The 1934 Congress of this Institute, and also the annual exhibition, will be held at Bristol, from July 9 to July 14. This will be the 45th Congress. Preliminary particulars are obtainable from the Secretary, 90, Buckingham Palace-road, S.W.1.

Cardiff's Water Supply.

Cardiff Waterworks Committee has decided to apply to the Ministry of Health for sanction to borrow £40,000 to develop a water supply from the lower catchment area at Llwyn-on, in the Brecon Beacons, which will give the city an additional daily supply of 4,000,000 gallons

Portland Stone Trade.

The situation of the Portland stone trade was shown in figures presented at the recent annual Court Leet of the Royal Manor, when it was reported that the industry was at a standstill, and that for stone raised from the quarries during the past 12 months only £577 was due to the royalties. Output fell from 18,566 tons in 1932 to 6,413 tons this year.

A Prize Award.

The Council of the Institution of Civil Engineers have awarded the Coopers' Hill War Memorial Prize for 1932 to Mr. E. F. Reid, M.A., Assoc.M.Inst.C.E. (Oxford), for his paper on "Failures in Steel and Cast-Iron Mains and Provision for Their Protection." This prize was founded by the Coopers' Hill Society in memory of Coopers' Hill men who lost their lives in the War.

Architecture Club Supper Discussion.

The second supper discussion of the session will be held by the Architecture Club at the A.A. premises, 34, Bedford-square, W.C.1, on Monday, December 4. The topic will be: "Are we tinkering with the Slum Problem?" The discussion will be opened by Mr. F. E. Towndrow, A.R.I.B.A., and a number of persons engaged in clearance work will be present.

Preservation of Durham Castle.

At a meeting of the executive committee of the Durham Castle Preservation Fund, Sir Charles Reed Peers, late chief inspector of Ancient Monuments for the Office of Works, was appointed consulting architect to the fund. The work on the west front, overlooking the river, is nearing completion, and the committee has decided that the work of consolidating and underpinning the south wall of the Norman Gallery shall be proceeded with at once, so far as the funds in hand permit. The engineer in charge of the work is Dr. Oscar Faber, O.B.E.

Two Appointments Vacant.

The Isle of Ely C.C. require a temporary architectural assistant at a salary of £4 10s. per week. A clerk, with architectural or building experience, is also required, the salary being £2 per week. Forms of application may be obtained from Mr. R. D. Robson, A.R.I.B.A., County Architect, County Hall, March, Cambs, and must be returned by December 16.

Vacancy for Town-planner.

The Government of Southern Rhodesia require a fully qualified Town Planning Officer, at a commencing salary of £700. The appointment is for a minimum period of three years. Further particulars are obtainable from the Official Secretary, Office of the High Commissioner for Southern Rhodesia, Crown House, Aldwych, W.C.2. Applications must be in by December 16.

St. Mary Magdalen, Tilehurst.

The erection of St. Mary Magdalen, at Tilehurst, is proposed to take the place of the present temporary church. The architect is Mr. R. Fielding Dodd, F.R.I.B.A., 21, Turl-street, Oxford. Major C. C. Hardy, C.E., of the parish, with the help of Mr. J. Goodfellow, has just completed an excellent scale model of the proposed new church. A perspective and interior view of the church were given in our issue for July 7, 1933.

R.I.B.A. Conference of Art Teachers.

A conference attended by teachers at schools of art and technical institutions was held at the R.I.B.A. recently, the chair being taken by Mr. T. A. Darcy Braddell, F.R.I.B.A., Hon. Secretary of the Board of Architectural Education. An interesting paper on "The Organisation of an Architectural Course" was read by Mr. Joseph Addison, M.C., F.R.I.B.A., headmaster of the School of Architecture of The Polytechnic, Regent-street, London.

Architects Honoured.

Sir Raymond Unwin, P.-P.R.I.B.A., received on November 20 the honorary degree of Doctor of Architecture from Toronto University.

On the recommendation of the Senate of Liverpool University, the Council has conferred the title of Professor Emeritus upon Mr. C. H. Reilly, Roscoe Professor of Architecture from 1904 to 1933.

At a recent meeting of the Court of Governors, Mr. A. C. Dickie, M.A., A.R.I.B.A., formerly Professor of Architecture, was given the title of Professor Emeritus in the University of Manchester.

Christmas Holiday Architectural Lectures

The seventh series of Christmas holiday lectures on architecture will be given at the Royal Institute of British Architects by Mr. E. R. Jarrett, A.R.I.B.A., on Monday, January 1, Wednesday, January 3, and Friday, January 5, 1934. The talks, which will be illustrated by lantern slides, will be held at 3.30 p.m. on each day. Mr. Jarrett has selected as his subject, "Some London Buildings": (1) Mediæval; (2) Renaissance; (3) Modern. The Council of the Royal Institute of British Architects have agreed to offer four prizes in the form of books for essays on the series of lectures. There will be one prize each for boys and girls under and over 14 years of age respectively.

R.I.B.A. New Building.

During the last fortnight, the first of two girders, which are to go over the banqueting hall of this new building has been brought from the works of Messrs. Matthew T. Shaw and Co., Ltd., at Millwall, to the site. These girders are plate girders, 61 ft. long by 12 ft. deep, weighing 35 tons. The girders were too large to go across the small swing-bridges which connect the Isle of Dogs with the mainland. The first girder has, therefore, been lowered into a barge, which was towed round to the Albert Docks. The Port of London Authority lent a floating crane to lift it from the barge to the lorry. It was taken through the streets of London on Wednesday night, November 15. It was turned across Portland-place and taken through the main entrance, entirely blocking the traffic for some hours! It was finally hoisted into position on its stanchions on Monday morning, November 20.

HOUSING ABROAD

Mr. F. R. Yerbury, Hon.A.R.I.B.A., in delivering, on November 25, the fourth of a series of public lectures on the housing problem organised by the A.A., at 36, Bedford-square, W.C.1, said that it was probably not generally realised what stupendous efforts had been made all over Europe to improve housing conditions since the War. Indeed, the position was much more serious in certain countries than in ours, partly due to the fact that in some countries the question of housing had never been seriously dealt with by the State or by such trusts and housing societies as had been in existence for so many years in this country. One result of the war had unquestionably been the forcing of the recognition of the right of every individual to be decently housed, and also of the right of the ordinary man in the street to the amenities which in the past were created by great artists and architects for the use of the few. The result of this could be seen in most countries in Europe.

People were often misled by the external appearance of some of the Continental housing schemes. It was often forgotten, however, that the actual accommodation provided in the great blocks of Continental flats was far below the standard of anything which would be acceptable in England. In many cases the accommodation provided for a family amounted to one living room—in which the cooking and washing-up arrangements were placed—a lavatory, and two bedrooms. A private bathroom was very rarely met with, and bathing accommodation was arranged for in communal bathrooms. Provision of small individual houses in the solution of the housing problem abroad was not often found. One of the most interesting experiments which he knew of was on the outskirts of Paris. There a system of construction invented by a French engineer had been adopted, and houses and blocks of flats were being built with a rapidity almost unknown before. One scheme at Bagneux, housing about 600 families, took six months to complete from the day of the commencement of the digging of the foundations until it was fully occupied by the people for whom it was intended. There was another at Drancy which offers a very interesting study. It consists of a number of blocks up to five stories, with five great towers running up to fifteen stories, there being four flats to each story. The adoption of that system of housing virtually in skyscrapers was extremely significant, and it was the first time it has been adopted in Europe. Many thought that that offered the most practical solution for the future. The rapid building of such towers could be carried out by the clearance of a comparatively small part of a densely-populated slum area.

COMPETITION NEWS

Llandudno Bathing Pool Scheme.

Plans for the Llandudno proposal to construct a £30,000 bathing pool are under the consideration of the Bathing Pool Committee, who have inspected over 20 designs submitted by architects and engineers from all parts of the country. The Council desired designs suitable for three different sites, one on the west shore, one in the centre of the bay, and the other between the pier and the Happy Valley. Half the designs were for the first-named site. The committee, after hearing the views of the engineer and surveyor, decided to obtain expert opinion before making definite recommendations to the Council.

Proposed Town Hall, Dagenham.

Dagenham (Essex) U.D.C. have been in correspondence with the R.I.B.A. regarding an architectural competition for a proposed town hall at Dagenham. It has not yet been definitely decided to build the town hall, as the Council have been unable to obtain sanction to raise a loan from the Ministry of Health. A deputation has attended at the Ministry, however, and details of the accommodation required are to be drawn up as a basis of application for loan sanction.

CORRESPONDENCE

Registration and the Economic Outlook of the Salaried Architect.

SIR,—The Association of Architects, Surveyors and Technical Assistants is a body concerned with the economic and political aspect of the profession, more particularly in relation to the welfare of the man in salaried employment.

Immediately after the War, the great increase in salaried and official employment emanating from, and as part of, a general economic development, was so evident (as compared with pre-War years) that a new policy for the profession was a necessity. Existing organisations were not inclined to recognise this great change (except as a matter for disapproval), and in consequence the Association of Architects, Surveyors and Technical Assistants, with membership limited to those in salaried employment, was formed for the purpose of evolving a constructive policy for this field and affording protection as far as possible.

Throughout the progress of the Registration Bill through Parliament the A.A.S.T.A. watched and promoted the interests of salaried men in the profession with the utmost attention, supporting the Bill with that broad outlook which ultimately succeeded in placing the measure (certainly in a much revised form) upon the Statute Book as the Architects' (Registration) Act, 1931.

Under the provision of this Act, salaried men, through the medium of the A.A.S.T.A., are represented on the Registration Council by one member in respect of every five hundred of its architect members. The A.A.S.T.A. has also a representative on the Registration Board of Architectural Education. Therefore, so far, the inception of the A.A.S.T.A. has produced some measure of tangible recognition of the valid interests of men in salaried employment in the architectural profession, and the Association is established by law in a position effectively to watch and promote their claims in connection with the Registration Act and any Amending Act which may follow.

The law of the land has now given the salaried man a stake in the destinies of the profession which has hitherto been immeasurably beyond his grasp. It is now "up to" him to see that he uses this privilege to its utmost possibility by ensuring that the interests of the salaried element—the majority of the profession—is represented in due proportion to its numerical strength by the simple process of reinforcing the membership of the A.A.S.T.A.—the only body which the Act has installed as his mouthpiece in the Architects' Registration Council, which from henceforth must be the controlling body for the affairs of the architectural profession.

It behoves all within the profession to be under no delusion concerning the enormous change which the Registration Act means to the profession. Hitherto its direction has of circumstantial necessity been in the nature of (legally) unauthoritative views promulgated by the Royal Institute of British Architects, but from henceforth that direction will be by the Registration Council possessing legal authority established and supported by Act of Parliament.

From every conceivable standpoint this change should be all to the good, as it will liberate the R.I.B.A. from the burden of political and economic considerations and enable it to pursue its way as a learned body dedicated to the promotion of the art of architecture. In future the politics and economic control of the profession will be in the hands of the appointed legal administrators of its destiny—the Registration Council. In these respects the focus of the profession has shifted, and those who have not yet realised the fact and have not placed their names on the Register will in due time be led to appreciate the significance of this great metamorphosis.

In the near future, such matters as the code of professional conduct, the scale of remuneration of architects, whether in private practice or salaried employment, will, emanating from the Registration Council, be vested with legal authority instead of being in the form of pious hopes. The wide and profound significance of this should be grasped and clearly comprehended by every salaried architect on the Register. As regards this very important change which the Registration Act has brought about, a great awakening is necessary in many quarters, but while the oblivion of others need not concern the salaried man, it is essential that, in his own interests, he should awake promptly and become really alert regarding the outlook of his profession under the new influence which this Act has brought into being.

The atmosphere is distinctly clearer than hitherto, and the salaried man must appreciate that no longer need he languish in an atmosphere of dilettante fog, but can, if he be so minded, become unitedly self-reliant through the medium of his own active organisation, the Association of Architects, Surveyors and Technical Assistants, which has an authorised hand in the control and administration of the Architects' (Registration) Act.

R. WYNN OWEN,
F.R.I.B.A., F.R.S.A.
(President, A.A.S.T.A.).

Qualified Men and Low Salaries,

SIR,—To further the correspondence appearing in your last issue and kindled by my letter in protest against low salaries for qualified men, I would like to take this opportunity of replying to the question asked by Mr. A. Seymour Reeves, secretary of the A.A.S.T.A. Firstly, however, I would like to say that it pleased me to note that my letter provoked at least two supporting replies, and that the A.A.S.T.A. are giving their full attention to the matter in question. In replying to Mr. Reeves' question as to whether I am assisting in the effort for improvement, or whether I am merely asking others to do something, I must confess to the latter, not as an admission of fault, but merely because I am not in a position materially to assist the situation. I would like to put it this way: that were I in a position to employ qualified men, I should most certainly pay them a reasonable living wage; but the fact remains that I am not, and, in consequence, like many others, I am powerless immediately and directly to assist in the improvement.

I have, therefore, no alternative but to leave the situation in the hands of those more fortunate people who are able to employ qualified labour, in the hope that their decency and honesty will guide them in the matter of the remuneration of their qualified assistants.

INDIGNANT.

Deposited Plans by Architects.

SIR,—With or without intention, an important contribution to this debate is made in your Editorial Notes, in which you draw a comparison between the position of the architect and that of the doctor and lawyer. I venture to say that the cases are not truly comparable. Taking first the case of the lawyers, and having regard to the influence this profession has brought to bear on the framing and interpretation of the laws, it would be strange to find that they had not taken to themselves some privileges in early times, and hung on to them with grim determination. From the lawyer's point of view, the results are doubtless very satisfying, for they are paid for both impeding and furthering justice.

Turning to that of the doctors, one has but to look back a comparatively short distance in time to realise how necessary it was to protect the community at large from the ravaging effects of their extreme ignorance. Here the issue was one of life and death, and on account of the danger of contagion it was essential that all doctors should be compelled to take the necessary educational courses and attain standard qualifications. That measures designed to protect the community did ultimately raise the status of the medical profession is, of course, true. But the case put up for the architect differs in that it frankly urges a claim to have his services thrust upon people unwilling to employ him. In your figure of 90 per cent. we have the measure of this unwillingness. The case also differs from that of the medical profession in that the safety of our buildings is not an issue. The architect does not tell us that they are unhealthy, but unsightly. He has over and over again said the same thing about buildings put up by architects of the past; he says the same about those put up by architects of the present, and will in all probability continue to do so in the future. In this he is doubtless right, for some of the buildings seen in London are hideous.

When all has been said, the fact remains that it is thoroughly well worth while to engage an architect to design a house, providing one can afford it, and that a qualified architect is chosen. At present the uninstructed layman has difficulty in distinguishing the qualified from the unqualified, and for some years to come the difficulty will remain. But in course of time it may be possible to bar out the unqualified.

PROVINCIAL.

Electricity for the Householder.

SIR,—Now that we are promised a universal supply of electricity in this country at low cost through the "Grid," perhaps the British electrical concerns will consider the question of standardising domestic fittings and appliances with a view to making them interchangeable in all localities.

One reason for the widespread use of electricity in the United States is the fact that fittings and appliances can be used in different areas having different sources of electricity supply, while replacements can be obtained without difficulty anywhere, because manufacture, and, consequently, stocks, are standardised.

In this country we seem to be in a similar position to that years ago when motor-cars were made without any regard to standardisation of sizes or parts. Now that electric lighting, heating and labour-saving appliances can do so much to help the householder it seems a pity that this remaining difficulty, which becomes very real when one moves into another house, should not be overcome by the manufacturers concerned.

C. R. TAYLOR
(B.Sc., A.M.I.Mech.E.).
Chancery Lane, W.C.

Architects' Diary and Technical Reference.

The committee which was appointed to edit the Architects' Technical Reference, which is issued annually by the Architectural Association to its members, has, as a result of very numerous and lengthy meetings, revised and amplified the reference to a very considerable extent, with the result that the Council is of the opinion that the new issue will be the most valuable thing of its kind in existence. This has only been possible by the co-operation of experts on almost every subject included in the reference.

The new issue will consist of 200 pages with diagrams and illustrations, and will be bound up with a diary. One copy will be issued free to each member of the Association. Owing to its constitution the Association is not in a position to sell copies to others than members, but it is suggested that possibly many members may like to acquire extra copies for members of their staff or to give to friends, and copies will therefore be available for sale to members at 12s. 6d. each. The Council feels that the publication will be of such value that as large an edition as possible should be printed, and it would be a definite advantage to the Association if members would take extra copies.

"THE BUILDER" DEBATE

LXVIII.—SPECIALISATION FOR ARCHITECTS.

"That students of architectural schools, during their general course of training, should specialise towards a particular branch of architectural design."

SIR,—The planning of buildings to-day is, few will deny, of a higher standard than twenty years ago. The need to extract a higher degree of efficiency from buildings at a lower cost has given fresh incentive to the architect to reduce planning to a fine art.

Under these circumstances, it is not surprising that, while far from becoming standardised, the planning of various types of structure is being based on certain standard principles, evolved by the leaders in that particular branch of design. Such classes of buildings as hospitals, cinemas, theatres and factories spring readily to mind. It is not too much to say that the majority of buildings, as detailed above, are designed by groups of architects who have made a special study of their particular branch. One finds, for example, the names of certain architects occurring time and again in your "New Cinemas" column. There are, again, acknowledged experts in hospital design and for municipal buildings.

It is not too much to infer from this that specialisation in one branch of work gives the most satisfactory results so far as clients are concerned. In addition to this practical proof of the value of specialisation, I do not think that anyone will dispute the fact that a specialist is likely to produce better architecture than an architect who is unable to allow the elevation to "grow" happily out of the plan because he is uncertain of the principles upon which the plan is founded. My first claim, therefore, is that specialisation benefits both client and architecture, and that, much in the same way as the aim of most doctors is to set up in Harley-street as specialists in one or other branches of surgery or medicine, architects will in the future tend increasingly to specialisation.

The position of the architect then arises. The established architect specialist has, of course, no grumble, but what of the position of the student or young practitioner? We shall find, I think, that with the exception of the young man who is to take over, or commence for himself in, a country practice, the average student goes into the office of an architect who is specialising in some form or another of building. I endorse, therefore, the suggestion—already put forward by the President of the Architectural Association—that students at our architectural schools should, from the first, have in mind some class of work in which they would like to specialise, and work throughout their student career towards that end. I cannot feel that such a course would in any way handicap the future architect from carrying out another type of job should opportunity arise. The principles of planning, of construction and of design remain constant. I submit, Sir, as the future trend seems clearly to be towards a greater specialisation in design, that it is folly if we do not arrange architectural studies in our great schools towards that end.

POSITIVE.

The Opposer's View.

SIR,—I cannot commence my reply to "Positive" better than by quoting a sentence with which he winds up his argument: "The principles of planning, of construction, and of design, remain constant." That sentence seems to me to strike at the heart of his argument; in fact, all through he appears to have serious misgivings as to the direction in which his reasoning leads him, as though he had resolved to support a proposition without being clear in his mind how much he really believed in it. For instance, after recommending the young student to specialise at an early date, he says: "I cannot feel that such a course would in any way handicap the future architect from carrying out another type of job should opportunity arise." I am at a loss to understand how, if specialisation is necessary to carry out efficiently one type of job, another type could be carried out with less general training than a normal student would receive, who had not specialised in one subject.

The medical specialist does not go in for treating chicken pox; in fact, he is generally quite lost if a case of this sort comes his way. He must be a specialist or a G.P., and I feel that very much the same thing applies to the practice of architecture. In other words, I cannot accept as fair debate a suggestion that the student can study one single branch of architecture so intensively as to be entitled to be called a specialist, and to neglect the general quality of his architectural training.

But "Positive" is right in saying that the principles of planning, etc., are constant, and it is a poor architect who cannot quickly grasp the essential technicalities of a job, from which to produce the clean and direct plan. We meet such cases time and again, and we see the men who excel in one job, excelling equally in other intricacies of quite a different character. The great architect is the one whose mind is alert to the essentials of the case, and we have many instances of such men who can produce first-class architecture applied to problems as wide as the poles in everything but their common architectural character. Take the present President of the R.I.B.A., who has produced a cathedral, university buildings, and a power station, among numerous other works. Is it to be imagined that his outlook would have been equally pliant and adaptable had he limited his youthful training to a study of Gothic cathedrals and churches?

But let us assume that specialisation is a practical proposition. Is it good policy to put all the student's eggs in one basket? What classes of building are there which we can safely say are likely to be produced in sufficient quantities to ensure careers for life for a number of young specialists? I can think of none that have remained stable in the past, nor of any that I would care to guarantee in the future. And it must be remembered that so soon as the specialist building becomes out of date as model for the job, the specialist is on a level footing with any other architect of a good general training. Take the case of hospitals. The normal ward plan of a hospital on modern lines is entirely different from that which was universally accepted 12 years ago. Is it to be imagined that the early training of a hospital architect of pre-war days makes such an architect better qualified to design a modern hospital than any other qualified man? One of the most up-to-date of recent hospitals was designed by a firm famous equally for office buildings, museums and housing schemes.

To my mind, the whole essence of the argument is that the important factor with the successful architect is his mental approach to any building problem, rather than his knowledge of incidental facts. If he has the right type of brain, the facts will be absorbed with ease, but, if he has not the right type of brain, an intensive specialist training will only produce by him the rule of thumb product which leads nowhere.

I should be most reluctant to send out into the world young men with a lop-sided training, limited in capacity to carry out only a narrow range of work for which no guaranteed demand existed. Such a course would, in my opinion, not only be unwise and unfair to the student so trained, but would be definitely against the chances of free development in architectural style. The fully equipped architectural mind must be free to approach each several problem, of whatever type, *de novo*, and it is only the most catholic training that will produce this mental outlook.

Neither do I accept "Positive's" statement that the fact that many architects appear again and again upon the same class of work, as proof that specialisation is the most satisfactory method from the clients' points of view. If this type of argument were admissible, then surely many others would follow. For instance, "Positive" will have noticed that 90 per cent. of the building public go to the speculative builder for their small houses, designed complete. I am sure he will agree with me that this is no proof that this is the most satisfactory procedure from this type of clients' point of view. We cannot accept this kind of evidence while the public is so little acquainted with the capacity of the fully trained architect. As things are, they follow one another like sheep.

I have only, therefore, to repeat my confirmed belief that the fully trained architect can give of his best in any problem of planning, and can only be called fully trained if he is out of one groove of specialist practice.

NEGATIVE.

[*This subject is now open for general discussion. The views of correspondents will be welcomed.*—ED.]

Growth of the R.I.B.A.

The newly published Kalendar of the R.I.B.A. provides evidence of development during the last twelve months. The Fellows have increased in number from 1,707 to 1,723, the Associates from 2,827 to 2,966. The Licentiates now number 2,397, and the total number of architects and students of architecture in the ranks of the R.I.B.A. and its allied and associated societies throughout the Empire has increased from 18,366 to 18,594. The number of these allied and associated societies has in the centenary year of the R.I.B.A. reached a total of 100—64 in the Home Countries and 36 in the Empire overseas.

"COMFORTS," ITCHINGWOOD COMMON, LIMPSFIELD.
From a drawing by MR. ARTHUR KEEN, F.R.I.B.A.

BUILDING REGULATIONS

In our last issue we gave the text of a paper on "Building Regulations," read on November 23 by Mr. C. Roland Woods, M.B.E., Barrister-at-Law, before the Institution of Structural Engineers. In the discussion which followed, Mr. A. N. C. Shelley (Ministry of Health), moving a vote of thanks to Mr. Woods, said that one of the difficulties in the Ministry of Health was that more or less definite complaints were received—usually less rather than more—but it was not easy to relate those complaints to the existing law. Mr. Woods had put his finger on one or two of the difficulties, as, for example, the diffusion of the legal requirements which had to be complied with. It was a source of difficulty, when designing a building, working out stresses, and so on, to have to refer to a law which was scattered about in several different places, and there was no reason in the nature of things why the law should not be brought together. The Ministry of Health had done its best, given the law as it stood at the moment, to overcome that difficulty, for it had drawn up Memorandum 34, which represented a start at collecting under one cover the headings or pointers indicating where to look for one's requirements. He would emphasise that in mentioning this matter he did not wish to deter the professions concerned from their efforts to get this matter dealt with in a legal, statutory way, nor did he wish to deter them from supporting the other suggestions Mr. Woods had made for legislation. On the contrary, he pointed out that the Minister, in 1932, had committed himself, in a published document, to the view that all building by-laws ought to be brought up to date every ten years. The professions now had a chance of urging that view upon the Government with perhaps more success than they might have had in past years, because proposals were on foot, following the consolidation of the Local Government law by a measure which had received Royal Assent a few days ago, for the consolidation of the Public Health Law. There was also a suggestion to give the Ministry power, on a statutory basis, to entertain disputes between a building owner on the one hand and a local authority on the other. Those disputes were already being entertained to a limited degree; comparatively few were coming in, but he had no doubt that more would come in, and that more of the money now spent on litigation would be spared, if that power were placed on a statutory basis.

The speaker then referred to recent remarks of Sir William Ray, who had said that the new Act might well prove to be a model for Building Acts through the country. He (the speaker) questioned whether the structural profession really wanted that. For his part, therefore, he hoped that, whatever suggestions were made to the Government with regard to legislation, it would not be suggested that direct statutory and immobile control of building law was wanted. He regarded it as essential to preserve the greatest virtue of the provincial system as it existed, *i.e.*, the facility with which a large part of it could be changed.

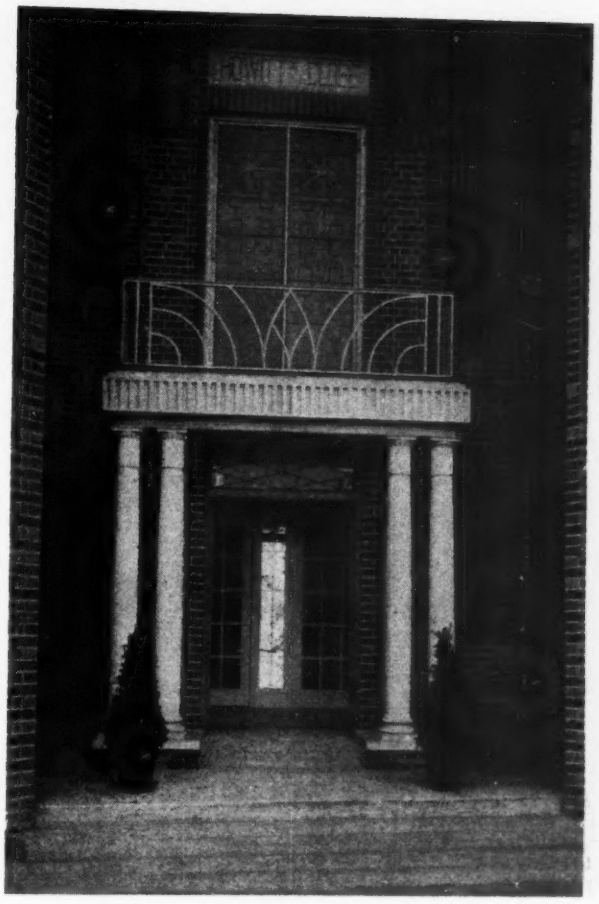
Mr. Ewart S. Andrews, B.Sc., M.Inst.C.E. (Vice-President), seconding the vote of thanks, suggested that a local surveyor should have the right of acceptance of plans, for he could not see why it was necessary that a Council must approve those plans and why those who submitted the plans should wait until the next meeting of the Council for approval. Not only should the local surveyor have the right of acceptance, but the applicant should have the right to appeal to the Council if his plans were refused, and should have the right of audience in the matter which was of the nature of an appeal. That was a common procedure in many Government departments, and it had worked excellently. As to procedure under the London Building Acts, the profession was better off by reason of the power of the Council to give consent or waiver where an engineer was unable to comply with the existing law. But he suggested that that procedure was extremely long-winded, clumsy, and entirely unsuitable. If practice had become so established that certain things, not provided for by the legislation, could be permitted automatically, then the legislation should be brought up to date, so that the district surveyor had authority to give the consent, and building owners and their professional advisers would avoid not only the inconvenience but also the feeling of uncertainty and the terrible delay which arose.

Mr. Maurice E. Webb, V.-P.R.I.B.A., said that conditions in London were absolutely ridiculous. All the Borough Councils had their own rules and regulations. There was a system of drainage known as the "one-pipe system"; Marylebone had adopted it, but other parts would not allow it. The London Building Acts would not allow it, but yet it was being done. There was also the question of the internal water-closet, which was allowed in certain districts in London but not in others. In some districts the sewage pipes could be inside, but in the others they must be outside. Before a new Building Act was promoted, could not the L.C.C. bring some of its own laws up to date without having to go to Parliament and then produce a new Building Act? But he urged that the Act should deal only with vital questions of principle, leaving the County Council to settle detailed questions as and when they arose.

Mr. W. T. Creswell, K.C., speaking on the question that the Ministry of Health should have statutory powers to adjudge disputes between building owner and local authority, said that he was rather doubtful—and the matter would need some consideration—whether they could set up the Minister as a sort of tribunal. There was too much departmental government in this country. The Minister had immense powers, which he (the speaker) considered should never be in this country, so that he did not want to give the Minister more power. It would be very wise to set up some technical tribunal—he understood that the L.C.C. was considering provision for that in its new Act—a tribunal to which one could go on the spur of the moment, as it were, just as one could go to one of the arbitration courts in the City. That was the sort of thing we wanted in this country.

Mr. C. J. Kavanagh said one might presume that legislation, both for bridges and for buildings of all kinds, was designed to ensure public safety. He suggested that the solution of the problem was to make British Standards Specifications the basis of all regulations under Acts of Parliament or under by-laws. The very static nature of the London Building Act had been a great hindrance, and half the troubles with building in this country was due, not to by-laws, and certainly not to regulations, but to that Act. But for the powers of the waiver the Act would have been scrapped long ago. The structural industries must see to it that in any future legislation the local authorities would not be permitted to bring technical regulations into the frame of a rigid Act; the regulations should be made perfectly fluid, as they would be under by-law practice.

Mr. C. Harper, M.I.Struct.E. (Deputy Borough Engineer, Barking), said his authority, in order to assist those submitting plans, and to avoid putting them to unnecessary expense, generally approved plans for buildings subject to the steelwork details being to the satisfaction of the surveyor. That policy had worked very smoothly and had been of considerable help to clients.



"HOWITT CLOSE," BELSIZE PARK, N.W.: The Entrance.
MESSRS. HENRY F. WEBB AND ASH, LL.R.I.B.A., Architect.
(See pages 862 and 872.)

Competition for Women Sculptors.

The annual competition for the Feodora Gleichen Memorial Fund grant of £100 for women sculptors was won by Miss Helen Harling, of Pembroke Studios, Pembroke-gardens, W. The second grant was awarded to Miss Sylvia E. Bosley, of Edith-road, W. There were eleven entries.

ILLUSTRATIONS

PLATES.

Glyn, Mills' Bank, Lombard-street.

New banking premises for Glyn, Mills and Co. have recently been completed at 67, Lombard-street, E.C., to plans by Sir Herbert Baker, R.A., F.R.I.B.A., and Mr. A. T. Scott, F.R.I.B.A.

The superstructure above ground floor is built of hand-made bricks, and the window-frames are of wood, painted white, following closely the Georgian character and proportions. The ground floor is in Portland stone with large bronze-framed windows lighting the banking hall. The quoins, up to the main cornice, and the balustrade are also stone. The proportions of the elevations suggest a certain dignity and domesticity, while they form a contrast to the commercial character of the neighbouring buildings. The Tavern sign of the "Anchor" has been placed over the central doorway, while the keystones to the main arches, one on either side of the main entrance, are carved. In the centre of the main front to Lombard-street, at second-floor level, is a cartouche carved in stone, bearing the arms of the Glyn family, complete with helm and crest.

The building can be sub-divided internally into four sections from the sub-vault to the roof, these being: (*a*) Accommodation on three floors below ground, containing vaults, heating chambers and mechanical services, storage, filing-rooms and office accommodation. (*b*) The Banking Hall, which rises through two floors in height in the centre of the building and occupies the whole of the ground floor area. The plan is cruciform in shape, rising to a great dome nearly 40 ft. in height. The walls are lined with Ancaster stone up to the springing of vaults and the floor of the public space, enclosed by stone-faced counters, is paved in Hopton Wood stone.

(*c*) A special suite of rooms has been arranged in close communication with the Banking Hall. The partners' room is circular in form, panelled in English oak and surmounted by a lofty dome in plaster. *En suite* with this large room are three private rooms which may be used on occasion as waiting-rooms. A private staircase and lift give the partners access to all floors of the building, and lead directly to the ante-hall of their private rooms on the fifth floor. (*d*) The first, second, third and fourth floors provide accommodation for the various departments of the bank, allocated in relation to one another and provided with lift services, intercommunicating staircases, etc. There is also a staff dining-room and one for the principal officials.

The partners' private suite occupies the fifth floor. This consists of the board-room, dining-room and three committee rooms, arranged round a common entrance-hall. The board-room is panelled in plaster with a wood dado. The ante-hall is lined in marble, and the three committee rooms have a simple treatment in plaster. The remaining portion of the fifth floor is taken up with kitchens, service departments and additional office accommodation. On the sixth floor living accommodation is provided for a caretaker, a housekeeper and maids.

All the joinery work was done by Holloway Bros., including the cedar panelling in the partners' dining-room, the English oak panelling in the partners' room, and the Indian rosewood door at the main entrance.

The general contractors were Messrs. Holloway Bros. (London), Ltd., and among the principal sub-contractors were :—Redpath, Brown and Co., Ltd., structural steelwork; Cement Marketing Co., Ltd., Portland cement and "Ferrocrete"; Moler Products, Ltd., Fosalsil blocks; Ames and Finnis, "Lombardic" tiling and Westmorland slating; Waygood-Otis, Ltd., electric passenger and service lifts; Le Grand, Sutcliffe and Gell, Ltd., artesian well pumps, service pumps and water mains; Rosser and Russell, Ltd., heating, hot water supply and ventilation; Art Pavements and Decorations, Ltd., "Biancola" and terrazzo work, black marble slips; Matthew T. Hall and Co., Ltd., external plumbing work and plumbing and drainage work; H. H. Martyn and Co., Ltd., bronze doors and frames; Henry Hope and Sons, Ltd., steel windows and bronze laylights; Crittall Manufacturing Co., Ltd., bronze windows, skylights, lean-to lights and dome lights; Caston and Co., Ltd., balustrades and grilles, etc., to staircase; Morris-Singer Co., cast bronze frames and sashes and bronze grilles, screens, etc.; Carter and Aynsley, Ltd., polished bronze metal handrail; Tudor Art Metal Co., Ltd., wrought ironwork, staircase balustrading, bronze and steel architraves to lift door openings; James Gibbons, Ltd., bronze butts, bolts and grilles, glazed screens and doors, etc.; Drake and Gorham, Ltd., electrical services; Newalls Acoustic Products, Ltd., "Paxfelt" acoustic felt; Plastering, Ltd., plastering work; W. B. Simpson and Sons, Ltd., red quarry paving, tiles and white glazed tiling to walls; Light Steelwork (1925), Ltd., parapet rail and standards and steel lining to bullion entrance; Chubb and Son's Lock and Safe Co., Ltd., pivot hinges, bolts, locks, etc., to main and bullion entrances and steel dado lining in bullion lobby; A. L. Gibson and Co., steel cupboards and shutters; Nettlefold and Sons, Ltd., ironmongery; A. Goldstein and Co., glass and glazing; Gas Light and Coke Co., gas work and general apparatus; Standard Time Co., Ltd., installation of electric clocks; Siemens Bros. and Co., Ltd., installation of automatic telephone equipment; Higgins and Griffiths, Ltd., electric light fittings; Accordo Blinds, Ltd., "Accordo" blinds; J. W. Gray and Sons, Ltd., lightning conductors.

Post Offices and Telephone Exchanges.

Chipping Norton Post Office and Telephone Exchange.—This building is situated at the west end of the long street comprising Chipping Norton. The exterior is faced with Bath stone supplied by the Yockney and Hartham Park Quarries, Ltd. The roof is of slates from the Burlington quarries. The accommodation consists of a public office and a sorting office on the ground floor; a telephone exchange and caretaker's quarters on the first floor; and engineers' offices, stores, and a garage are provided at the sub-ground level. The general contractors were Alfred Groves & Sons, Milton-under-Wychwood, Oxon, while the stone carving was by Mr. J. H. Cribb and heating by J. Combe & Son, Ltd.

The architect was Mr. H. E. Seccombe, A.R.I.B.A. (H.M. Office of Works).

Stanmore Post Office.—The new office is situated at Old Stanmore, on the London-Uxbridge road. The accommodation in the front block consists of public office, postmaster's room, etc., on the ground floor, with retiring-room accommodation on the first floor. Immediately behind is a one-story building comprising sorting office, instrument room and ancillary accommodation. The exterior is faced with bricks of a speckled-brown multi-tone, stone dressings being of Portland. The roof is covered with hand-made sand-faced tiles. Facing bricks and roof tiles were supplied by R. G. Ward & Co. The public office has a panelled dado and counter front in oak, the floor being paved with heather-brown tiles. The general contractors were Honour & Son, of Tring, while metal casements were supplied by Crittall, Ltd., and the heating installation installed by J. Combe and Son, Ltd.

Mr. F. A. Llewellyn, O.B.E. (H.M. Office of Works), was the architect.

Staines Post Office.—This building is in the High-street, and is the head post office for the Staines district. On the ground floor is the public office, with a counter 24 ft. 6 in. long, which, with other internal joinery, is in English oak. The floor is of heather-brown tiles, laid with wide cement joints, and the walls are distempered a light buff colour. Adjoining the public office are rooms for the postmaster and the writing staff, and at the rear of the building is a sorting office, 48 ft. by 36 ft., laid throughout in maple-block flooring. The first floor provides welfare accommodation for the female staff, a room for the contract officer, and a telegraph instrument room. The fuel store and central heating chamber are in the basement. The principal elevations are faced with 2 in. multi-coloured facing bricks with bright dark cherry-red quoins made by Messrs. Lawrence, of Bracknell, Berks, dressings being of Portland stone. The roof is covered with hand-made sand-faced antique tiles from the Pinewood Estate Brick and Tile Works, Newbury. The general contractors were W. H. Gaze & Son, Ltd., Kingston-on-Thames, whilst among the sub-contractors were : heat-installation, the Fretwell Heating Co.; stone carving, Messrs. Arrowsmith; and drainage, Limpus & Sons, Ltd.

The architect is Mr. D. N. Dyke, O.B.E., F.R.I.B.A. (H.M. Office of Works).

Stamford Hill Telephone Exchange.—This building is situated in the Seven Sisters-road and overlooks a small public garden on the entrance front. The exchange will accommodate 9,400 subscribers' lines in two apparatus-rooms situated on the first and second floors, with switch-room and retiring-room accommodation on the third floor. The exterior is faced with grey multi sand-faced bricks, the rusticated base being in a darker tone. The stonework throughout is in Portland and the roof is covered with Lombardic tiles. The general contractors were Rowley Bros., of Tottenham.

The architect is Mr. C. R. Fowler (H.M. Office of Works).

Mayfair Telephone Exchange.—This building adjoins Farm-street Roman Catholic Church, one front facing Mount-street Gardens. The exchange was designed to accommodate the automatic equipment for 30,000 telephone subscribers. The exterior is faced with Messrs. Lawrence & Sons' sand-faced bricks, with Portland-stone dressings. The roofs are covered with Lombardic tiles. The general contractors are Galbraith Bros., Camberwell.

The architect is Mr. P. K. Hanton, O.B.E., A.R.I.B.A. (H.M. Office of Works).

Merton Telephone Exchange.—This building is situated at the corner of Kingston-road and Kingswood-road, Merton. The building is for a full-unit telephone automatic exchange. Daneshill's hand-made sand-faced bricks were used with a certain number of moulded bricks as dressings to heads and sills of windows. Portland stone was used for plinth and key-stones. The general contractors were A. Roberts & Co., Ltd., of Earl's Court-road, W.8.

The architect is Mr. Christopher Bristow, A.R.I.B.A. (H.M. Office of Works).

The copyright of the photographs we use of these post offices and telephone exchanges is vested in H.M. Office of Works.

"Howitt-close," Belsize Park, N.W.

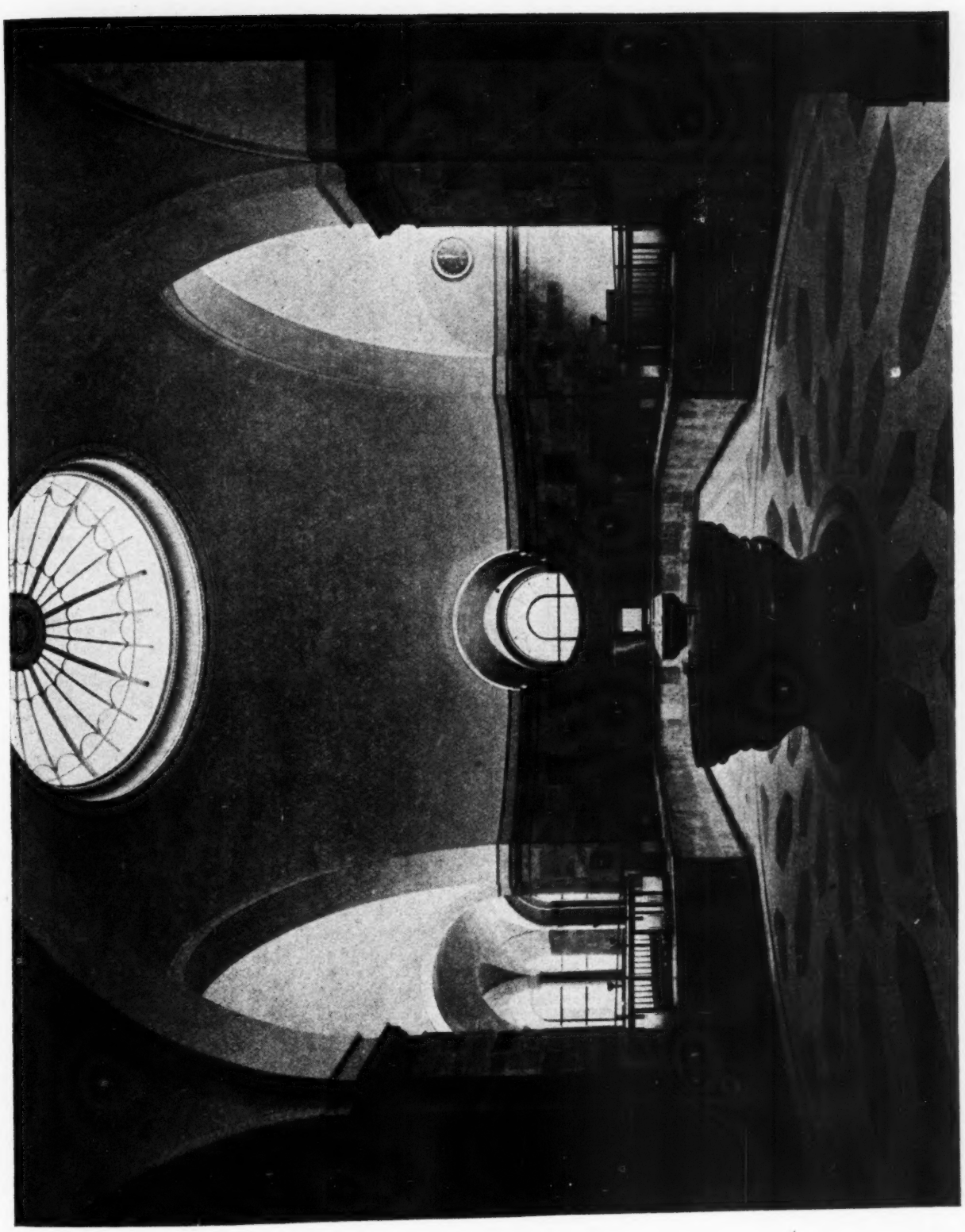
This is a block of flats just completed in Howitt-road, Belsize Park. There are two types of flats—bed-sitting-room flats, with a bed-alcove measuring 7 ft. square and a living-rooom approximately 20 ft. by 12 ft., and a series of two-room flats. They are fitted with electric or gas cookers, and modern baths with shower attachment. Refrigerators, "Easiwork" cabinets and wireless are installed in every flat.

The general contractors are Messrs. Rowley Bros., Ltd., of Tottenham, N., and among the sub-contractors are Dorman, Long and Co., Ltd., steelwork; Ragusa Asphalte Co., Ltd., asphalte; John Bolding and Sons, Ltd., sanitary fittings; Electrolux, Ltd., and Marco Refrigerators, Ltd., refrigerators; A. Goldstein and Son, glazing; Easiwork, Ltd., cabinets; Crittall Mfg. Co., Ltd., steel casements; E. Parkinson, Ltd., wall tiles and cork floors; Garton and Thorne, balustrades, etc.; Cork Insulation Co., Ltd., roof insulation; Holmes and Larkinson, electrical installation; Norris Warming Co., Ltd., electric heating; Overhead, Ltd., electrical fittings and cookers; Davis Gas Stove Co., Ltd., gas cookers.

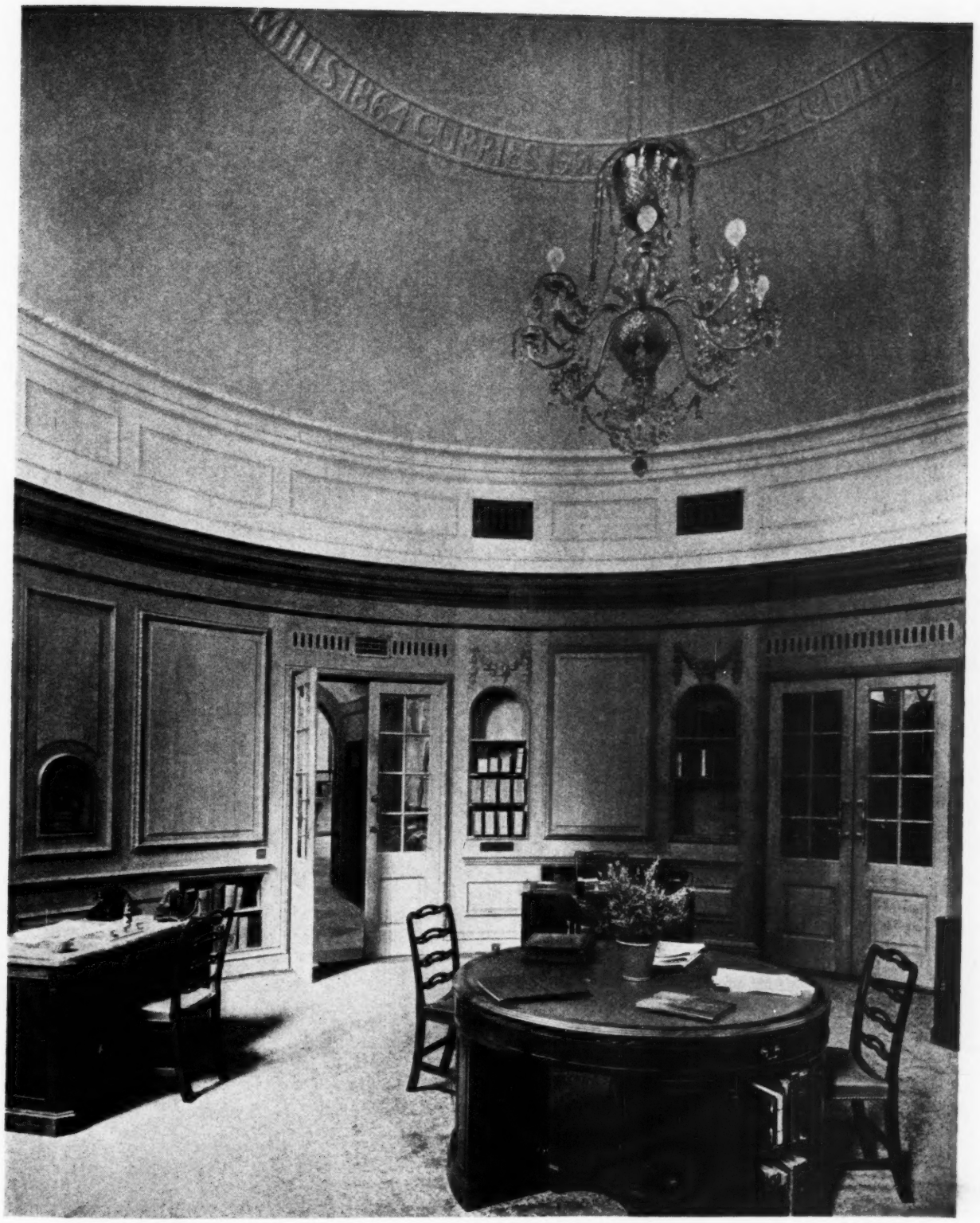
The architects are Messrs. Henry F. Webb and Ash, LL.R.I.B.A.

NEW BANKING PREMISES FOR GLYN, MILLS AND CO., 67, LOMBARD STREET, E.C.

SIR HERBERT BAKER, R.A., F.R.I.B.A., AND MR. A. T. SCOTT, F.R.I.B.A., Architects.

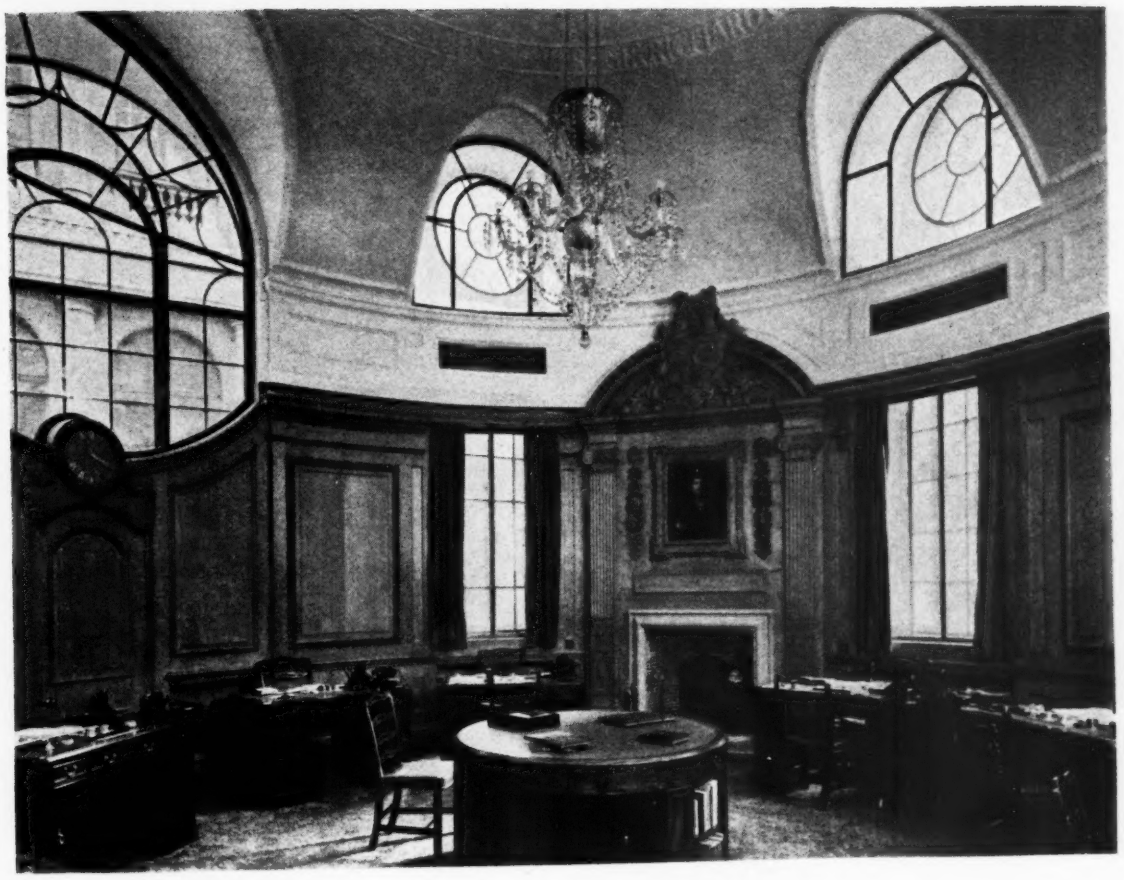


NEW BANKING PREMISES FOR GLYN, MILLS AND CO., 67, LOMBARD STREET, E.C. : The Banking Hall.
SIR HERBERT BAKER, R.A., F.R.I.B.A., AND MR. A. T. SCOTT, F.R.I.B.A., Architects



NEW BANKING PREMISES FOR GLYN, MILLS AND CO., 67, LOMBARD STREET, E.C.: The Partners' Room.

SIR HERBERT BAKER, R.A., F.R.I.B.A., AND MR. A. T. SCOTT, F.R.I.B.A., Architects.

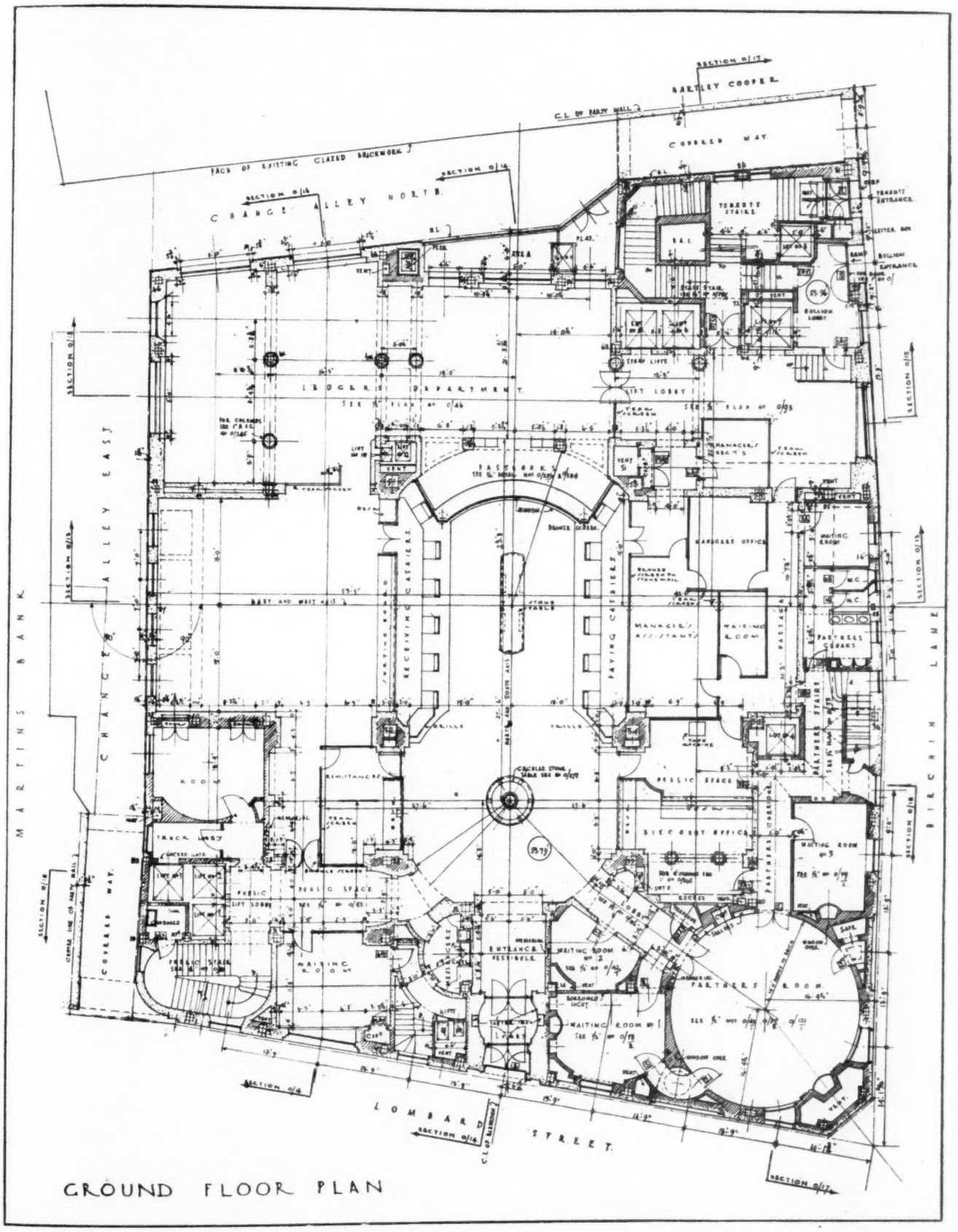


THE PARTNERS' ROOM: ANOTHER VIEW.

THE PARTNERS' DINING ROOM.

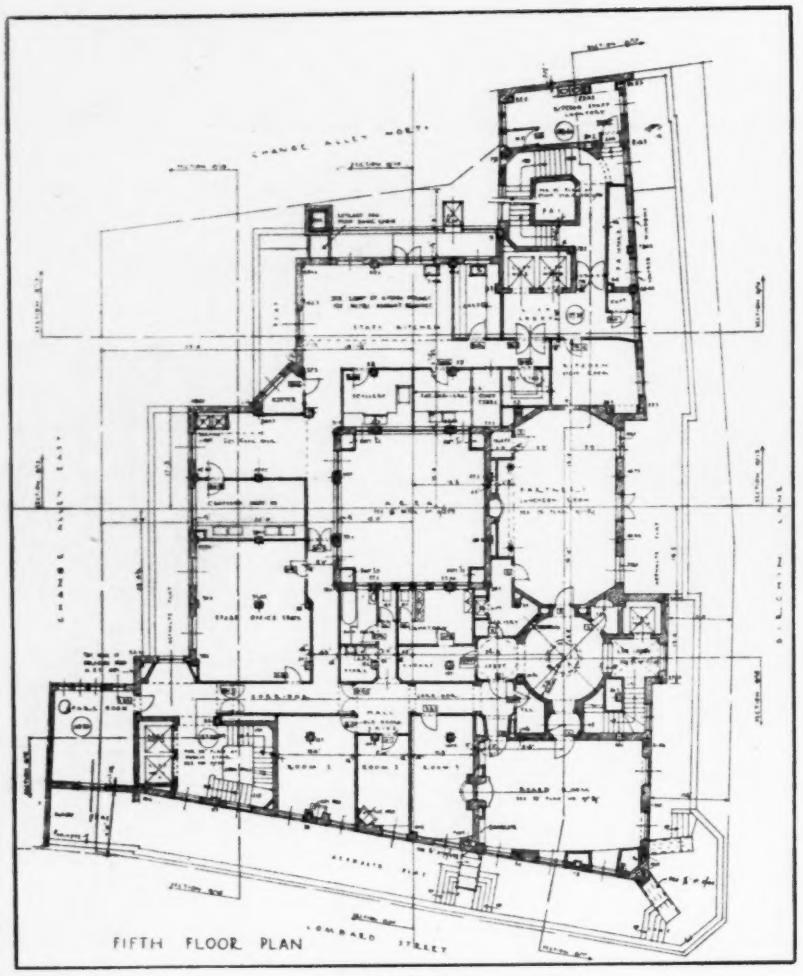
NEW BANKING PREMISES FOR GLYN, MILLS AND CO., 67, LOMBARD STREET, E.C.

SIR HERBERT BAKER, R.A., F.R.I.B.A., AND MR. A. T. SCOTT, F.R.I.B.A., Architects.

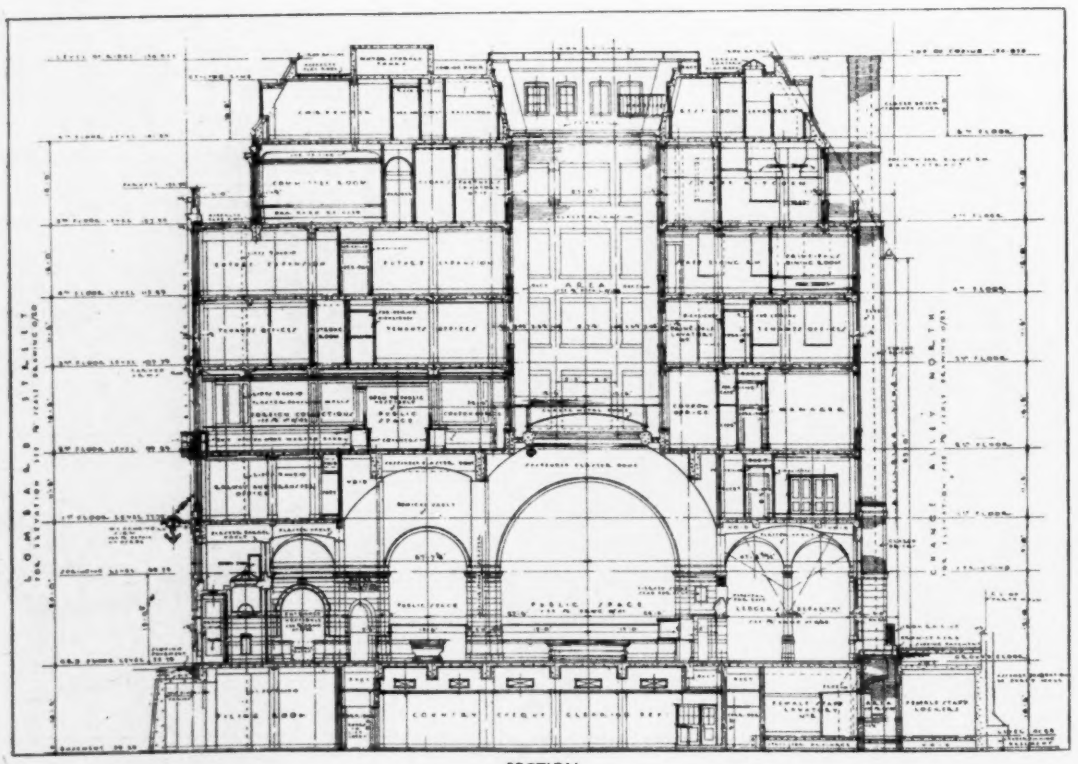


NEW BANKING PREMISES FOR GLYN, MILLS AND CO., 67, LOMBARD STREET, E.C.: Ground-Floor Plan.

SIR HERBERT BAKER, R.A., F.R.I.B.A., AND MR. A. T. SCOTT, F.R.I.B.A., Architects.



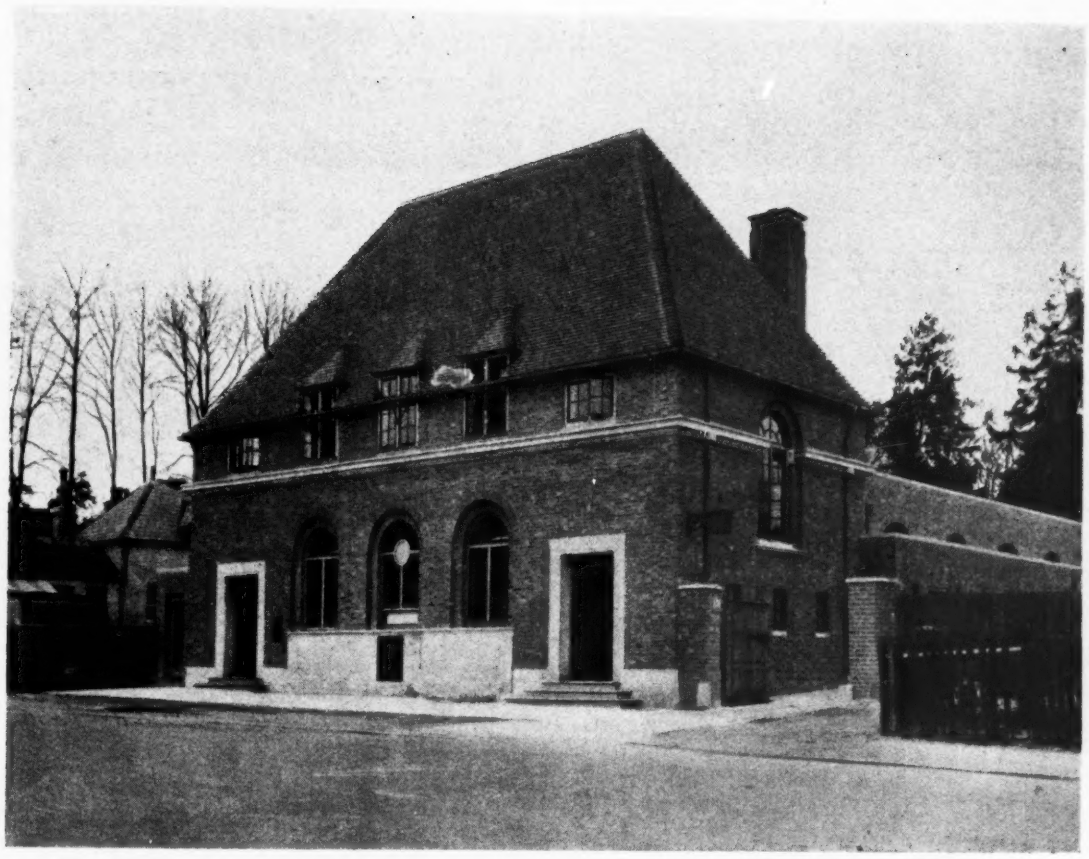
FIFTH FLOOR PLAN.



SECTION.

NEW BANKING PREMISES FOR GLYN, MILLS AND CO., 67, LOMBARD STREET, E.C.

SIR HERBERT BAKER, R.A., F.R.I.B.A., AND MR. A. T. SCOTT, F.R.I.B.A., Architects.

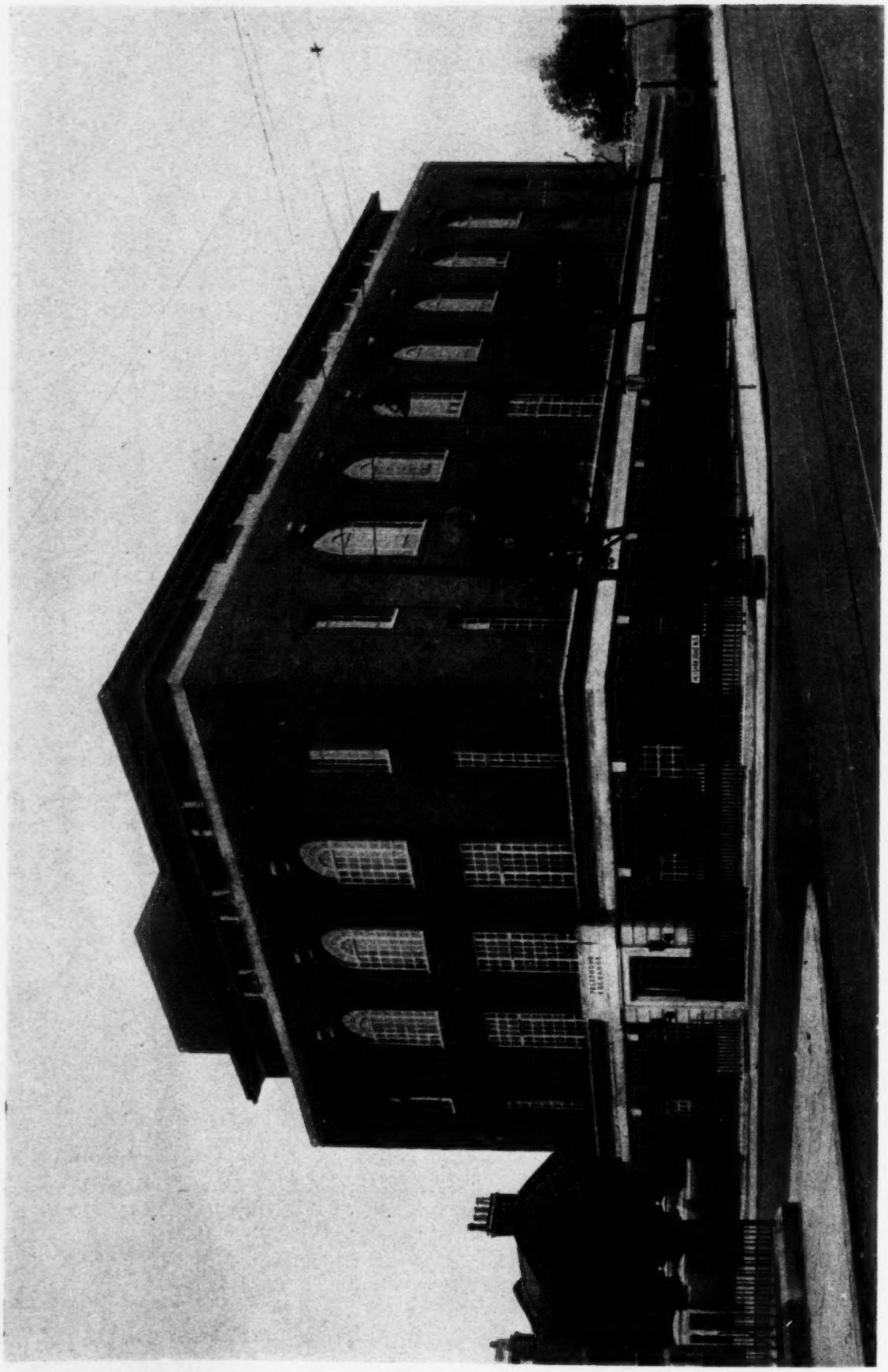


STANMORE POST OFFICE AND SORTING OFFICE.

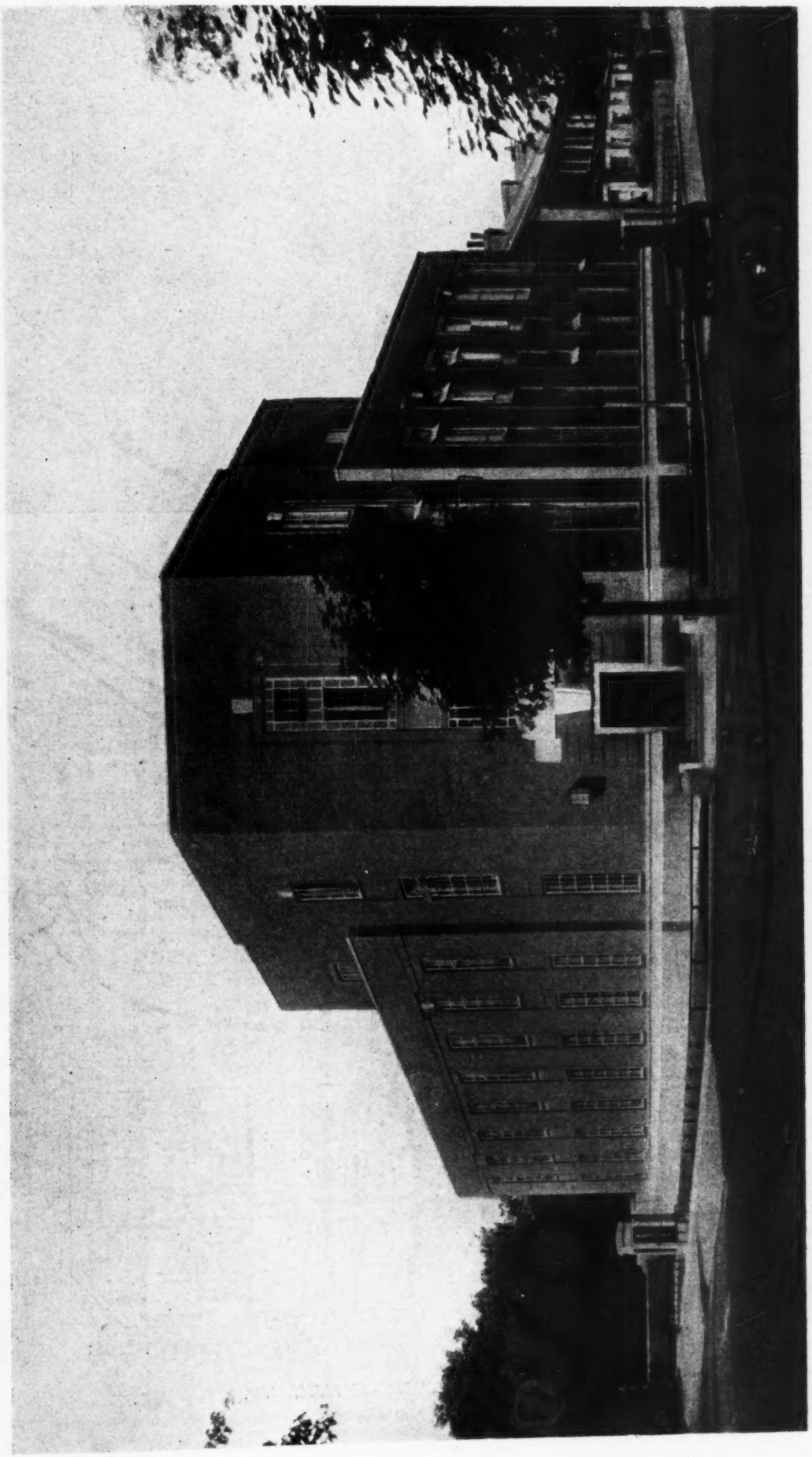
MR. F. A. LLEWELLYN, O.B.E. (H.M. Office of Works), Architect.

STAINES POST OFFICE AND SORTING OFFICE.

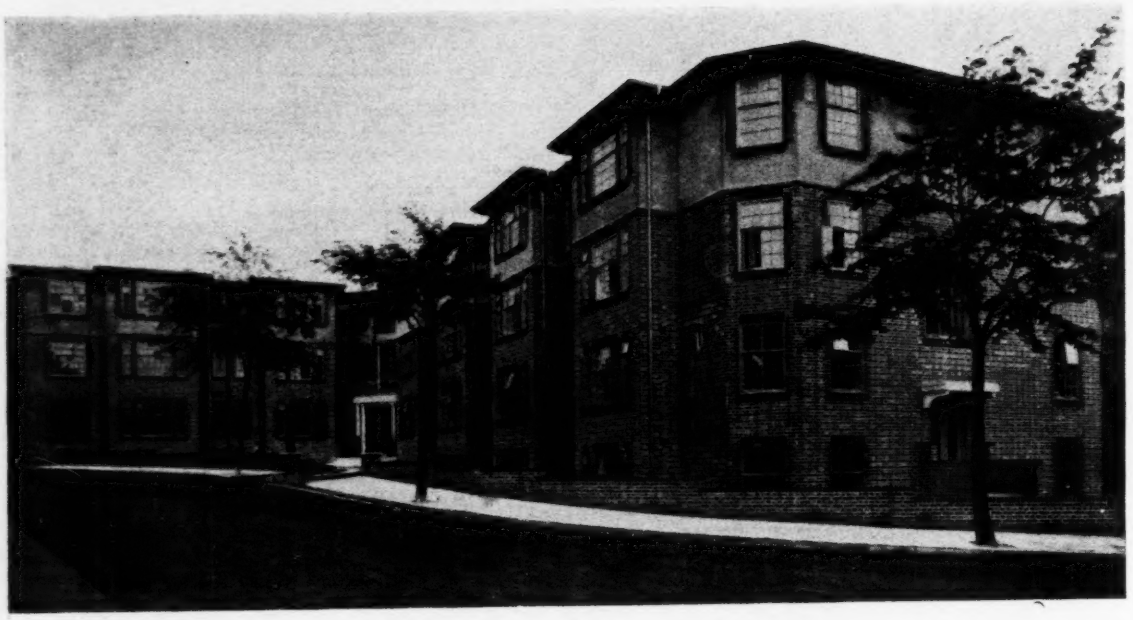
MR. D. N. DYKE, O.B.E., F.R.I.B.A. (H.M. Office of Works), Architect.



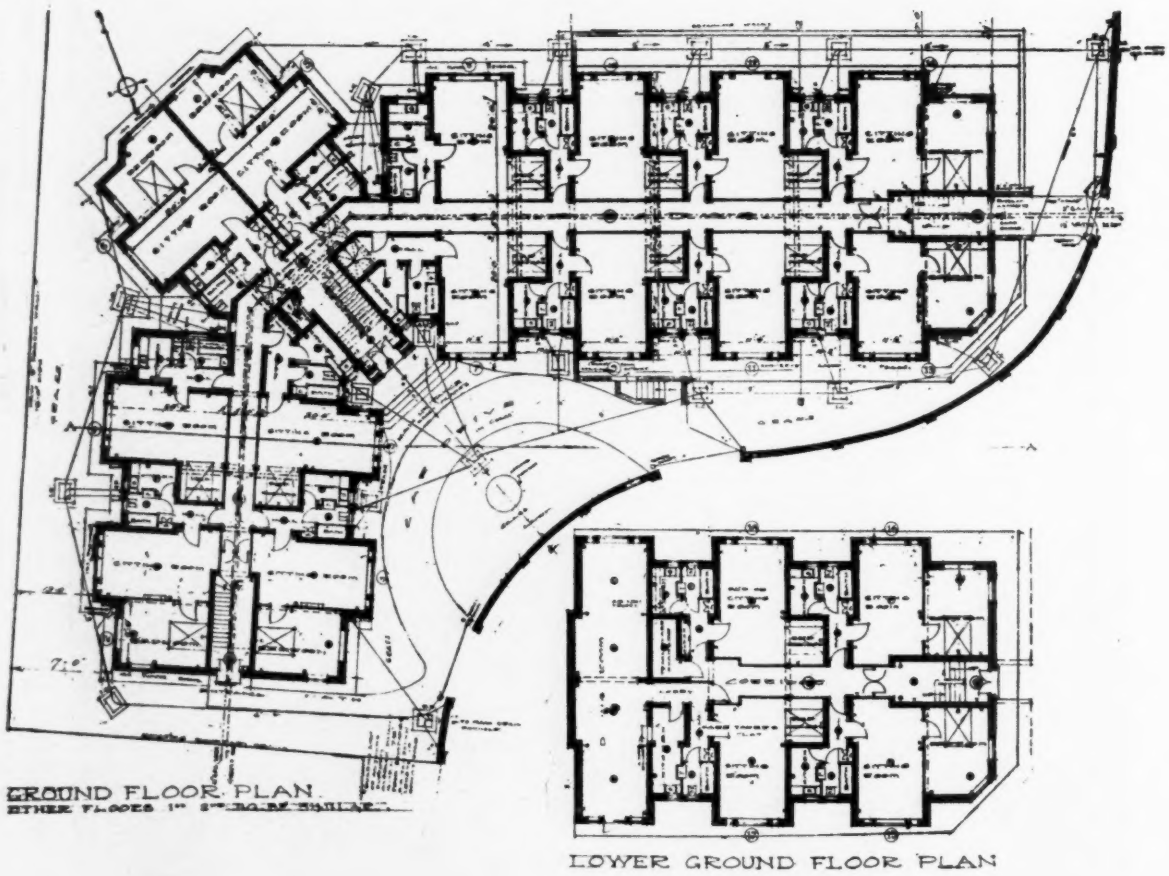
STAMFORD HILL TELEPHONE EXCHANGE, SEVEN SISTERS ROAD, N.
MR. C. R. FOWLER (H.M. Office of Works), Architect.



MERTON TELEPHONE EXCHANGE, KINGSTON ROAD, MERTON.
MR. CHRISTOPHER BRISTOW, A.R.I.B.A. (H.M. Office of Works), Architect.



GENERAL VIEW.



"HOWITT CLOSE," BELSIZE PARK, N.W.

MESSRS. HENRY F. WEBB AND ASH, LL.R.I.B.A., Architects.

A.A. VISIT TO ITALY.

A MEETING of the Architectural Association was held on Tuesday evening at 36, Bedford-square, W.C.1. Mr. C. Lovett Gill (President) was in the chair, and the principal business of the evening was to hear an address by Mr. F. R. Yerbury describing the visit made to Italy last summer by members of the Association.

Previously to the lecture there were nine nominations, ninety elections and one reinstatement. There was also a vote of condolence passed with the relatives of the late Mr. C. E. Varndell.

Mr. Yerbury's lecture was illustrated with a great number of excellent lantern slides. The lecturer explained that the object of the visit had been to see the new Italy rather than the old, and that the tour had been a very successful one. The visitors had found that Italy was no longer the museum and second-hand shop of Europe, the place where people went to buy old candlesticks and bring them home in triumph. To-day the visitor brought back memories of a nation so vital that the old things were no longer so interesting as they used to be. Speaking of his slides, he said that photographing was difficult in Italy; it was very often the case that it was forbidden. In the Milan exhibition it had been almost impossible. Directly he appeared with a camera an army of men in blue uniforms ran out and told him he should not take photographs. Of course, if he had already got the photograph that did not matter! Speaking of the general characteristics of modern Italian architecture, the lecturer said that the rubbish that was talked about internationalism was defeated directly a real artist got to work. Invariably in Italy, where the best men were working on modern lines, they showed the Italian influence right the way through, and a similar remark might be made about the architects of any other country one might go to. In all modern Italian work one found a great appreciation of material. Such places as cheap, fashionable restaurants in France or Germany were often shabbily furnished: but in Italy there was a real sense of the value of good material —wood, glass, colour, and so on.

Housing schemes showed the development of a country more than anything else. In Italy this work was not done by the Government, but by a society having its headquarters in Rome and with branches in every other city. This society was able to borrow money from the Government at a very low rate of interest and had privileges of various kinds, including some very special ones as regards cost of land. It produced great blocks of flats and let them at rents which the workers could afford to pay. A small profit was earned and carried on to other schemes. In the main the accommodation consisted of a living room, two or three bedrooms and a kitchen. As a rule, these rooms were larger than in the housing schemes of most other countries. There was not generally a bath in each tenement, but communal baths were provided on the ground floor or in the basement. It was interesting to see how architects in Italy were growing more and more modern. Whether in Milan, Florence or Rome, this was always the case. In Milan a tremendous amount of work was being carried out: great streets were being cut through the centre of the city and new buildings put up. The architect responsible for much of this was head of an architectural school in Milan. His own work was fresh and clean, but rather old-fashioned. But the school of which he was in charge was entirely modern. But the teacher in this case agreed with his students, saying he himself did what he felt he ought to do, but young people must express themselves in their own way. His outlook was broad, and he was prepared to accept anything that he believed was done honestly by anyone.

Housing in Great Britain.

A vote of thanks to Mr. Yerbury was proposed by the Chairman of the Science Committee of the R.I.B.A., Mr. S. Pointon Taylor, who took occasion to make some remarks on the housing problem in this country as it affected architects.

Mr. Taylor said he spoke with caution as a Civil Servant. He had read the president of the Association's inaugural address on the subject of how to increase the scope of the architect's activities. Every Minister of Health had advocated that increase, and it would sweeten and lessen his (the speaker's) own work if every plan he examined came from an architect's pencil. Architects had the whole of the working-class housing world before them: it was theirs by right of training, but they did all too little. He wondered why the great men of the profession never essayed it: was it because it was so hard to make a satisfactory job of the stringing together of the units of a housing scheme that they preferred the more spectacular town hall? He (the speaker) thought it was a social duty to help to a satisfactory solution of the housing problem.

Outlining the field, the speaker said there was first the State-aided operation, *i.e.*, slum clearance work under the 1930 Act, the reconditioning of rural cottages under the 1926 Act—now extended to 1935—and the guarantee proposals for private enterprise for normal housing under the 1933 Act. It should be impressed upon those responsible for all these proposals that architects were aware of all the things that made for economic construction, and that their special capacities for planning should be utilised by anyone anxious to achieve further economies. Those in charge of slum clearance should be told that architects, more than anyone else, realised that every £12 saved on a working-class house was equivalent to 3d. a week reduction in the rent over the whole period for which money would be borrowed. The owners of rural cottages requiring reconditioning should be shown how it would benefit themselves, their tenants and the community if they took advantage of the State and local authority subsidy. People with spare cash should be made to understand what a paying investment the private enterprise guarantee scheme was, especially if handled by architects on the technical side. As to other housing work the wealthy estate owner and the public utility society commonly availed themselves of architectural advice; but there remained the speculative builder. If a certificate of merit was given to the speculative builder for any house that met with architects' approval, it would be an inducement for him to design well himself, or to employ a capable designer.

Architects, having by the means suggested obtained commissions, should remember that difficult as it was to get a client it was yet more difficult to retain him. Where local authorities were concerned, architects had in some cases been superseded by official surveyors. This appeared to be because local authorities had erroneous notions about the amount of personal supervision an architect was dutifully called upon to provide. In such cases the supervision side should be stressed. Where it was impracticable to get or retain clients in this manner there was a great deal to be said for the arrangement which allowed the architect to lay out, design and specify, leaving the obtaining of contracts and supervision, etc., with the officials of the local authority. It remained to consider again how architects should keep their clients by the visual effect of their works, and that brought him very close to what he imagined to be Mr. Yerbury's objective, namely, research into the genesis and meaning of the present modernist movement as it affected architecture. Frankly, he was going to leave that for others to deal with, with one example, and a warning only. The warning was that although he was daily and constantly in touch with the representatives of local authorities all over the country, he found little or no appreciation of the ultra-modernist school. There would be some, believing in it thoroughly, who would nail their colours to the mast and stand or fall by their beliefs. They would not be the first or the last martyrs to die—but die they would. The world moved slowly. Ultra-modern buildings could not be put on the scrap-heap like an ultra-modernist book or picture. They remained static, and those architects who preferred to live comfortably rather than to die gloriously would edit clients' wishes in the good old way rather than supply them with something they ought to like but did not understand.

In calling on Signor Bosio to second the resolution for a vote of thanks, the President said that Signor Bosio was brother to an architect in Florence who had made it his business to show the visitors whatever there was to be seen in that city. Signor Bosio read a letter from the Italian Ambassador expressing regret at inability to attend the meeting, and asking Signor Bosio to express the Ambassador's gratification at the great interest and appreciation displayed by the British architects, saying that he was sure the visit would be followed by others, and that Italian architects would visit this country. Signor Bosio continued that the English visitors had been somewhat surprised by the sense of vitality and vigour found everywhere in Italy. Vitality and vigour permeated the Italian people. It was founded on faith—faith in themselves, in their leader, in the future of Italy and that of Europe and mankind.

The President thanked Signor Bosio for attending the meeting, and said he believed some Italian architects were going to visit this country. He hoped they would have the same type of reception as had been given the British architects in Italy. Signor Bosio should be asked to convey to the Ambassador the grateful feelings of the Association for the amount of trouble taken by the Italian architects. They had met their visitors at every station with a programme of what there was to see, had arranged transport and other matters, and done their best to enable the British architects to see all that was best worth seeing in Italy.

The vote of thanks was heartily accorded, and Mr. Yerbury having briefly responded, the proceedings terminated.

The London Architecture Medal.

At the R.I.B.A. general meeting to be held on Monday next, at 8 p.m., the President, Sir Giles Gilbert Scott, R.A., will present the R.I.B.A. Medal and Diploma for a London Building completed between 1930 and 1932 to Messrs. Sir John Burnet, Tait and Lorne, and Messrs. Campbell Jones, Sons and Smithers, the architects, for Lloyds Bank Headquarters, Lombard-street elevation. The presentation will be preceded by a paper on "Contemporary London Buildings," by Mr. Charles Marriott, Hon.A.R.I.B.A.

Chartered Quantity Surveyors' Dinner.

The annual dinner of the members of the Chartered Surveyors' Institution who practise as quantity surveyors will be held at the Edward VII Rooms, Hotel Victoria, Northumberland-avenue, W.C.2, on Wednesday, December 13, at 7 for 7.30 p.m. Tickets are obtainable on application to the Secretary of the Institution, 12, Great George-street, Westminster, S.W.1.

COMPENSATION ON TAKING LANDS—V

By WILLIAM T. CRESWELL, K.C., Assisted by C. G. ARMSTRONG COWAN, Barrister-at-Law.

The Acquisition of Land by Agreement.

UNDER the Lands Clauses Acts, lands which are authorised to be taken compulsorily are purchasable by agreement between the promoters of the undertaking and the owner. Sometimes an agreement may be reached before the Special Act is passed, and in that case it is often embodied in the Special Act itself. But if the Special Act has already been passed, an agreement may be entered into before a notice to treat is given (or, of course, after it is given); and the terms of the agreement must be in accord with the terms of the Special Act. For instance, the agreement must relate only to the precise area of land authorised to be taken for the purposes of the undertaking, and the sale of land must be absolute and for a money consideration. But such money consideration may be either by way of a lump sum price or by an annual rent charge secured on the tolls or rates charged by the promoters of the undertaking. The recovery of the rent charge is by action for debt, or by distress, if and when it is 30 days in arrear.

The agreement to purchase is in the nature of a contract for the sale and purchase of land, and can be enforced by an action for specific performance of the contract.

Promoters may also enter into restrictive covenants in respect to land if such covenants do not preclude them from using the land for the purposes for which it was acquired. And if an owner is entitled and willing to sell an easement or right attached to his land, and such right is sufficiently sanctioned by the Special Act, the parties may agree for its sale. Provision for the sale of such easement or right is frequently made in local and personal Acts, and in some general Acts, as, for instance, in the Land Drainage Act, 1930.

Determination of Amount of Compensation by Arbitration.

Where a claim for land taken exceeds £50 and the claimant's interest is greater than that of a tenant from year to year, the claim may be determined by arbitration on the owner being served with the notice to treat. If he is desirous of going to arbitration rather than that compensation shall be determined by a jury, he must give notice to the promoters of such a wish, and that before the promoters have issued a warrant to the sheriff to summon a jury.

All claims must set out the interests of the claimant in the land to be taken, and the amount claimed as compensation, though claims do not limit the amount of the award. However, the promoters are at liberty to pay the amount claimed without recourse to arbitration, if they judge it to be undesirable. Procedure is as under the Arbitration Act, 1889, except in so far as it is inconsistent with the special arbitration provisions of the Lands Clauses Acts. The promoters must take up the award, and on failure by them to do so, application should be made to the Court, by the owner of the land, for a mandamus compelling them to take it up. Some Acts rule out the Arbitration Act of 1889, as, for instance, the Agricultural Holdings Act, 1923, the Roads Improvement Act, 1925, and the Rating and Valuation Act, 1925, and some Acts exclude part only of the 1889 Act, as the Building Societies Act, 1894, and the Friendly Societies Act, 1896.

Assessment of Compensation by a Jury.

In cases where claims for lands being taken exceed £50, and where the tenants' interest is greater than a tenancy from year to year, and no agreement has been reached by the parties, or no final award is made within three months of arbitration, or within such further time as the parties have agreed, or the Court allowed, for the making of the award, then in any of these circumstances compensation will be assessed by a jury.

The promoters can always take the initiative and cause a jury to be summoned, but an owner cannot do so. The owner can, however, give the promoters notice to do this, and, if necessary, apply to the Court for a mandamus to compel them to do so. The warrant to summon a jury must be under the seal of the promoters and in accordance with the notice to treat.

If none of his land is to be taken, the owner should always specify with his claim that he desires compensation for the injurious affection of his land to be assessed by a jury; in which case, unless the compensation claimed is proved, the promoters must issue their warrant to the jury.

Either a common or a special jury may be empanelled for the purpose. The verdict of the jury is conclusive as to the amount of compensation to be paid.

Costs of the case before a jury are payable by the promoters if the verdict gives compensation *over and above* the "sum previously offered" to the promoters, *i.e.*, the sum offered to the claimant ten days before issuing the warrant to summon a jury.

Assessment of Compensation by Justices.

When lands are taken compulsorily and the interest of the owner is not greater than that of a yearly tenant, and the amount of the claim does not exceed £50, the claim for compensation can be determined by two justices of the peace. In the Metropolis or other places where there is a stipendiary magistrate, he acts alone. The justices have no jurisdiction to inquire into the *title* of the owner, they are only to determine the amount of compensation. No claim to compensation can be supported where the occupier has received a legal notice to quit, and the land is not required until the notice has expired.

The value of the land taken or the damage by severance to other lands not taken and which are held for the same period and from the same owner only can be considered. In no case can land be considered which is held for a period of over a year.

The costs of the case are in the discretion of the justices.

THE PROGRESS OF HOUSE BUILDING

SIR HILTON YOUNG, the Minister of Health, visited Manchester on Monday, November 20, to open the 20,000th municipal house, and spoke on present housing conditions. He said that this was an appropriate occasion to review the present position of housing for wage earners. In 1932 we brought to an end the subsidies for small houses in general. The cause of that was the great fall in the cost of building, which made it possible for local authorities to build small houses to let at a rent possible to the lower paid wage earners, without the help of any subsidy. To have continued the subsidy would have been a waste of public money which we could ill-afford. What had been the sequel to that action in the year that had passed since? It had been that which was foreseen. There had been a continued fall in the cost of building. On the basis of local authorities' contracts, let during September last, a house of the type which we needed for the lower paid wage earner—the non-parlour house usually of 760 sq. ft. or less—was now being built on an average for £281, whereas, when, in December, 1932, the subsidy was abolished, it cost £295. That meant that the economic rent of such a house, when built by a local authority, now stood at 7s. 7d. a week, in comparison with 8s. 2d. a week at the time of the abolition of the subsidy. The case on the figures for the abolition of subsidy which was strong a year ago was stronger still now. That which was true of direct subsidy was still more true of the indirect subsidy which consisted of the provision of loan capital by the Exchequer at less than market rates, a form of concealed subsidy which had nothing to recommend it in comparison with open subsidy. More important still was the consequence of the abolition of the Wheatley subsidy as to the activity of house building by private enterprise. In the 12 months to September, 1932, private enterprise built 133,486 houses, and that had been about the rate for some years. In the following 12 months, the last 12 months, those which saw the abolition of the subsidy, to the end of September last, private enterprise built 169,100 houses, practically 36,000 more, breaking the record for private enterprise, a striking and encouraging fact. In the same period 49,213 houses have been completed by local authorities, all houses for manual workers, making 218,313 houses in all for the year. This was actually a greater number than the 210,000 houses contemplated for the year 1933 by the Wheatley programme.

That was the tale of houses actually built. As to the present rate of building the figures were encouraging, too. The building plans passed in September last by about 140 of the principal urban authorities for houses alone amounted to 5.7 million pounds value compared with 3.7 million pounds in August, and 3.9 million in the preceding September, 1932, an increase of 53 and 45 per cent. respectively. The increased activity of private enterprise was being maintained.

Moreover, the number of unemployed in the building trade in England and Wales a year ago was 224,574; to-day it was 147,356. These figures made it certain that since the abolition of the subsidy not only had there been no falling-off in the rate at which we were overtaking the housing shortage, but there had been a substantial acceleration of the rate.

Turning to the type of house that was being built without any subsidy by private enterprise, an analysis of 11,056 private enterprise houses built in the half-year to September 30, 1933, in five metropolitan and 16 other areas, suggested, with all due reservation for a test by sample, that out of the houses provided in England and Wales by private enterprise in the last six months, some 18 per cent. or 15,000 were actually let, and that 33 per cent. or 26,000 had a rateable value not greater than £13 (£20 in the metropolitan police district). No doubt, however, the majority of these private enterprise houses were still not in the cheapest class. But their price had been falling. It was now sometimes as low as £350, and houses erected at Aldershot under Section 2 of the Act of 1933 had an all-in cost of no more than £320.

No doubt, too, the majority are houses to sell and not to let. Nevertheless, the better-paid wage earners were filtering up into these houses to sell, and vacating accommodation to let for the less well paid. There was evidence of that from many quarters. He wished to emphasise that the Government were not leaving the provision of small houses to let to expectation or to chance even for an interim period. They were still meeting it at the present time, and for some time to come, by subsidised building by the local authorities. There had been approved, and were now or should very shortly be under construction with subsidy under the Wheatley Act, 41,000 more houses, as many as we had in September, 1932, the result of the proviso to Section 1 of the Act of 1933, which enables the Ministry to accept for subsidy any schemes of local authorities for meeting their local housing needs that were substantially ready for submission when the Act passed. So the situation was that the present needs of the country for small houses to let and its needs for some time to come were in fact being met, and would be met, with the help of subsidy.

Local authorities had made to him (the Minister) proposals contemplating guarantees for 13,000 houses under the Housing (Financial Provisions) Act, 1933.

SOCIETIES & INSTITUTIONS

R.I.B.A.

FOLLOWING are notes from the minutes of the Council meeting held on November 6 :—

The Fellowship.—The Council, by a unanimous vote, elected the following architects to the Fellowship under the powers defined in the Supplemental Charter of 1925 :—Mr. J. F. Hennessy (Sydney), Mr. W. J. W. Forbes (Perth, W. Australia).

Election of Students.—The following Probationers were elected as Students of the R.I.B.A. :—R. G. Bell (special exemption), D. M. Dodd (Univ. of Liverpool), M. J. H. Goodchild (special exemption), C. J. Jerram (Northern Poly.), S. E. Malins (Birmingham Sch. of Arch.), J. H. Napper (Univ. of Manchester), Patricia J. Owen (A.A.), Denise M. L. Roberts (A.A.), H. P. H. Shepherd (A.A.), E. J. L. C. Steen (Armstrong College, Newcastle-on-Tyne.

THE MORLEY COLLEGE.

At Morley College, in the Westminster Bridge-road, Mr. F. E. Towndrow, A.R.I.B.A., is giving a series of lectures on "Modern Architecture." In the second of these, delivered on November 21, he dealt chiefly with the development on the Continent.

The most outstanding characteristic of the new architecture was, he said, that it was international—international in the social, economic and industrial conditions that produced it, and also in the general philosophic and architectural impulses which actuated architects simultaneously in different parts of the world. It was an internationality that was brought about more by similarity of conditions, and especially of materials, than by a similarity of temperament.

Sketching the history of the movement, the lecturer said it was really quite old in its foundations. Contrary to the public, and even professional, view, it was the result of the slow, continuous advancement over something like a century. It had arisen originally from weariness at the everlasting repetition of Classic and Gothic styles, and probably first manifested itself in the work of Karl Friedrich Schinkel, of Berlin, who, one hundred years ago, gave great simplicity to his buildings and endeavoured to get rid of all redundant ornament. Schinkel worked in what was generally called the Greek Revival, some of his work being inspired by the spirit rather than the letter of Greek architecture in its simplicity and its regard for essential structural form. In many respects his work might be related to the very simple English work at the time of the Regency by Nash and his contemporaries. In fact, in many of our English towns, such as Brighton, Weymouth, and the suburbs around London, especially Brixton, might be found very simple stucco houses built between 1810 and 1830 which were really quite modern in their form, resting almost entirely for their architectural effect on plain masonry, good proportions and good window spacing. Curiously enough, the flat roof, which was considered to be the very latest idea nowadays, was then in vogue, though the roofs were of lead instead of asphalt.

During the Victorian period, architecture went almost into chaos, but considerable advances were made in structural engineering. There was, for instance, the Crystal Palace first erected in Hyde Park in 1851, and from 1860 onwards there were some of the finest market halls of steel construction being built in France. In 1889 came the Eiffel Tower. Otto Wagner, of Vienna, in 1900—with whom was associated Adolf Loos—was the first architect to formulate what we understood by modern architecture, while an impetus towards town planning had been given by Sir Raymond Unwin in England. In France one of the most important pioneers in this field was Tony Garnier, Town Architect of Lyons, who for twenty years had been busy building the new quarters of that city. France had not moved so rapidly as some other countries, but her contribution had been considerable in respect to reinforced concrete construction.

LIVERPOOL ARCHITECTURAL SOCIETY.

Modern Churches.

A paper on "Modern Churches" was given to this Society on November 15 by Mr. Edward Maufe. Characterising the present era as a church-building age, the lecturer instanced the numerous churches which were being built in London and other parts of the country. He said we were trying to-day to escape from antiquarianism, to have a positive taste and not merely a privative or negative one. If we attempted to meet modern needs with ancient rules and formulæ our work would lack spontaneity, sincerity and life.

It must be realised that it was traditional to be modern, that was to say, the old builders built as well as they knew to suit their own conditions and did not seek to copy the past. They were the modernists of their day.

Functionalists must not stop short with the material facts and say, thus far and no farther; spiritual and æsthetic considerations were also facts. To deny the spirit and say that the material facts alone would bring beauty was merely a new Puritan creed; it was good as a revolt against indiscriminate and amateur ornament, but it was too easy: Puritanism was not enough. True functionalism was not new; the thing that was new about our present-day functionalists was that they stopped short with the material facts and wilfully neglected the spiritual ones.

Our danger now was not one of dead replicas but of forms built merely in revolt, of buildings primarily to surprise. This was a healthy sign, but buildings built from that motive alone were too narrowly dated—we tired of them in ten years—whereas churches should certainly have the attributes of the eternal. We must get something more fundamental than fashion.

Another danger was that there were many people who thought all difficulties were solved if only we were "simple"; they were confident that this word was an "open sesame" to beauty. But beauty was not negative. Merely to take away did not produce it. Beauty could be simple but also rich.

With the new churches there was a splendid opportunity for the Church to regain her old leadership of the arts : architecture, music, sculpture, painting, woodwork, ironwork, glass, weaving, and the rest. One wished that the great artists of the day could be employed quite simply on those things. One saw signs of it being done, but they were all too rare.

It was not the painter's fault that he was forced to make his paintings such that they could compete with others in galleries; it was the fault of architects for not employing him in their churches, houses and public buildings. If architects did employ the painter, then his paintings would have relation to human life, there would be less art jargon, and painting would be recognised as being but one form of art. It was childish to put down painting alone as art, to detach it from life, to make it an esoteric cult.

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OBITUARY

F. W. Waller.

Mr. Frederick William Waller, who has died at Gloucester, was the son of Frederick Sandham Waller, F.S.A., and traced descent from Edmund Waller, the poet. Ever since 1852, the year of Mr. F. S. Waller's appointment, the Waller family have been in charge of Gloucester Cathedral. Frederick Waller was appointed assistant resident architect with his father in 1892, and the old association was renewed five years ago by the appointment of his son, Colonel Noel Huxley Waller, M.C., L.R.I.B.A., to the same post. Both Mr. F. S. Waller and his son served as diocesan surveyor, and in partnership they dealt with repairs to nearly 200 churches, 100 rectories and vicarages, and a large number of public buildings. Apart from purely constructive work, Mr. F. W. Waller had a talent for adapting old buildings to modern uses, and this talent found scope in the repairs he designed for Tintern Abbey under the Office of Woods and Forests. Among his best-known buildings are the Town Hall and various wings in the Ladies' College at Cheltenham, Pen Moel at Chepstow, and a number of banks which he built for Lloyds at Cheltenham, Torquay, Dover, Bristol, Swansea, and elsewhere. He was 87.

Arthur H. Roe, A.R.I.B.A.

The death is announced of Mr. Arthur Henry Roe, A.R.I.B.A., deputy architect of West Ham. Mr. Roe, who was 61 years old, was articled at Exeter, and came to West Ham in 1896. He became chief of the architect's department in 1915, in succession to the late Mr. H. Shaw. Amongst other large schemes undertaken by the Council, Mr. Roe was responsible for the plans of the Council houses erected in 1920, and subsequently, the electricity offices and showrooms, the Romford-road baths, the extension of Goodmayes Mental Hospital, Harold Wood Children's Hospital, Langdon Hills Sanatorium, and Prince Regent-lane fire station. At the time of his death he was preparing plans for the completion of the colony for mental defectives at Ockendon.

William Gray.

The death has occurred at his residence at Scott's-place, Berwick, at the age of 87, of Mr. William Gray, senior partner in the firm of Gray and Paterson, architects, Berwick. Mr. Gray had been in practice in Berwick for about 60 years. He designed churches at Paxton, Cockburnspath, and Eyemouth, helped to plan the Garden City at Berwick, and also, more recently, designed the new church at Crookham.

H. A. Tipping, F.S.A.

Mr. Henry Avray Tipping, F.S.A., the garden architect and horticultural writer, who died on November 16, at the age of 78, was a leading authority on the history of the English home in all its aspects, human and architectural. Gardens were his special subject, both as a designer and historian, but his learning on all subjects connected with the house, from its general character at any particular period to the smallest of its contents in furniture or ornament, was immense. Among his publications are the monumental "English Homes," "English Furniture of the Cabriole Period" and "The Garden of To-day."

Allen Fairhead.

We regret to record the death, at the age of 80, of Mr. Allen Fairhead, son of the founder of the building and contracting firm of Messrs. Allen Fairhead and Sons, Ltd., of Enfield Town. He was a native of Enfield, and played a considerable part in the development of the district, where he enjoyed wide popularity and respect. He retired from active participation in the business in 1930, on which occasion he and Mrs. Fairhead received presentations from representative local people. From that time—as now—his sons, Messrs. H. Alan Fairhead and Harry G. Fairhead, have conducted the business. He was a builder of the old school, whose loss will be regretted by many, both in and outside the building industry.

COMPENSATION ON TAKING LANDS—V

By WILLIAM T. CRESWELL, K.C., Assisted by C. G. ARMSTRONG COWAN, Barrister-at-Law.

The Acquisition of Land by Agreement.

UNDER the Lands Clauses Acts, lands which are authorised to be taken compulsorily are purchasable by agreement between the promoters of the undertaking and the owner. Sometimes an agreement may be reached before the Special Act is passed, and in that case it is often embodied in the Special Act itself. But if the Special Act has already been passed, an agreement may be entered into before a notice to treat is given (or, of course, after it is given); and the terms of the agreement must be in accord with the terms of the Special Act. For instance, the agreement must relate only to the precise area of land authorised to be taken for the purposes of the undertaking, and the sale of land must be absolute and for a money consideration. But such money consideration may be either by way of a lump sum price or by an annual rent charge secured on the tolls or rates charged by the promoters of the undertaking. The recovery of the rent charge is by action for debt, or by distress, if and when it is 30 days in arrear.

The agreement to purchase is in the nature of a contract for the sale and purchase of land, and can be enforced by an action for specific performance of the contract.

Promoters may also enter into restrictive covenants in respect to land if such covenants do not preclude them from using the land for the purposes for which it was acquired. And if an owner is entitled and willing to sell an easement or right attached to his land, and such right is sufficiently sanctioned by the Special Act, the parties may agree for its sale. Provision for the sale of such easement or right is frequently made in local and personal Acts, and in some general Acts, as, for instance, in the Land Drainage Act, 1930.

Determination of Amount of Compensation by Arbitration.

Where a claim for land taken exceeds £50 and the claimant's interest is greater than that of a tenant from year to year, the claim may be determined by arbitration on the owner being served with the notice to treat. If he is desirous of going to arbitration rather than that compensation shall be determined by a jury, he must give notice to the promoters of such a wish, and that before the promoters have issued a warrant to the sheriff to summon a jury.

All claims must set out the interests of the claimant in the land to be taken, and the amount claimed as compensation, though claims do not limit the amount of the award. However, the promoters are at liberty to pay the amount claimed without recourse to arbitration, if they judge it to be undesirable. Procedure is as under the Arbitration Act, 1889, except in so far as it is inconsistent with the special arbitration provisions of the Lands Clauses Acts. The promoters must take up the award, and on failure by them to do so, application should be made to the Court, by the owner of the land, for a mandamus compelling them to take it up. Some Acts rule out the Arbitration Act of 1889, as, for instance, the Agricultural Holdings Act, 1923, the Roads Improvement Act, 1925, and the Rating and Valuation Act, 1925, and some Acts exclude part only of the 1889 Act, as the Building Societies Act, 1894, and the Friendly Societies Act, 1896.

Assessment of Compensation by a Jury.

In cases where claims for lands being taken exceed £50, and where the tenants' interest is greater than a tenancy from year to year, and no agreement has been reached by the parties, or no final award is made within three months of arbitration, or within such further time as the parties have agreed, or the Court allowed, for the making of the award, then in any of these circumstances compensation will be assessed by a jury.

The promoters can always take the initiative and cause a jury to be summoned, but an owner cannot do so. The owner can, however, give the promoters notice to do this, and, if necessary, apply to the Court for a mandamus to compel them to do so. The warrant to summon a jury must be under the seal of the promoters and in accordance with the notice to treat.

If none of his land is to be taken, the owner should always specify with his claim that he desires compensation for the injurious affection of his land to be assessed by a jury; in which case, unless the compensation claimed is proved, the promoters must issue their warrant to the jury.

Either a common or a special jury may be empanelled for the purpose. The verdict of the jury is conclusive as to the amount of compensation to be paid.

Costs of the case before a jury are payable by the promoters if the verdict gives compensation *over and above* the "sum previously offered" to the promoters, *i.e.*, the sum offered to the claimant ten days before issuing the warrant to summon a jury.

Assessment of Compensation by Justices.

When lands are taken compulsorily and the interest of the owner is not greater than that of a yearly tenant, and the amount of the claim does not exceed £50, the claim for compensation can be determined by two justices of the peace. In the Metropolis or other places where there is a stipendiary magistrate, he acts alone. The justices have no jurisdiction to inquire into the *title* of the owner, they are only to determine the amount of compensation. No claim to compensation can be supported where the occupier has received a legal notice to quit, and the land is not required until the notice has expired.

The value of the land taken or the damage by severance to other lands not taken and which are held for the same period and from the same owner only can be considered. In no case can land be considered which is held for a period of over a year.

The costs of the case are in the discretion of the justices.

THE PROGRESS OF HOUSE BUILDING

SIR HILTON YOUNG, the Minister of Health, visited Manchester on Monday, November 20, to open the 20,000th municipal house, and spoke on present housing conditions. He said that this was an appropriate occasion to review the present position of housing for wage earners. In 1932 we brought to an end the subsidies for small houses in general. The cause of that was the great fall in the cost of building, which made it possible for local authorities to build small houses to let at a rent possible to the lower paid wage earners, without the help of any subsidy. To have continued the subsidy would have been a waste of public money which we could ill-afford. What had been the sequel to that action in the year that had passed since? It had been that which was foreseen. There had been a continued fall in the cost of building. On the basis of local authorities' contracts, let during September last, a house of the type which we needed for the lower paid wage earner—the non-parlour house usually of 760 sq. ft. or less—was now being built on an average for £281, whereas, when, in December, 1932, the subsidy was abolished, it cost £295. That meant that the economic rent of such a house, when built by a local authority, now stood at 7s. 7d. a week, in comparison with 8s. 2d. a week at the time of the abolition of the subsidy. The case on the figures for the abolition of subsidy which was strong a year ago was stronger still now. That which was true of direct subsidy was still more true of the indirect subsidy which consisted of the provision of loan capital by the Exchequer at less than market rates, a form of concealed subsidy which had nothing to recommend it in comparison with open subsidy. More important still was the consequence of the abolition of the Wheatley subsidy as to the activity of house building by private enterprise. In the 12 months to September, 1932, private enterprise built 133,486 houses, and that had been about the rate for some years. In the following 12 months, the last 12 months, those which saw the abolition of the subsidy, to the end of September last, private enterprise built 169,100 houses, practically 36,000 more, breaking the record for private enterprise, a striking and encouraging fact. In the same period 49,213 houses have been completed by local authorities, all houses for manual workers, making 218,313 houses in all for the year. This was actually a greater number than the 210,000 houses contemplated for the year 1933 by the Wheatley programme.

That was the tale of houses actually built. As to the present rate of building the figures were encouraging, too. The building plans passed in September last by about 140 of the principal urban authorities for houses alone amounted to 5.7 million pounds value compared with 3.7 million pounds in August, and 3.9 million in the preceding September, 1932, an increase of 53 and 45 per cent. respectively. The increased activity of private enterprise was being maintained.

Moreover, the number of unemployed in the building trade in England and Wales a year ago was 224,574; to-day it was 147,356. These figures made it certain that since the abolition of the subsidy not only had there been no falling-off in the rate at which we were overtaking the housing shortage, but there had been a substantial acceleration of the rate.

Turning to the type of house that was being built without any subsidy by private enterprise, an analysis of 11,056 private enterprise houses built in the half-year to September 30, 1933, in five metropolitan and 16 other areas, suggested, with all due reservation for a test by sample, that out of the houses provided in England and Wales by private enterprise in the last six months, some 18 per cent. or 15,000 were actually let, and that 33 per cent. or 26,000 had a rateable value not greater than £13 (£20 in the metropolitan police district). No doubt, however, the majority of these private enterprise houses were still not in the cheapest class. But their price had been falling. It was now sometimes as low as £350, and houses erected at Aldershot under Section 2 of the Act of 1933 had an all-in cost of no more than £320.

No doubt, too, the majority are houses to sell and not to let. Nevertheless, the better-paid wage earners were filtering up into these houses to sell, and vacating accommodation to let for the less well paid. There was evidence of that from many quarters. He wished to emphasise that the Government were not leaving the provision of small houses to let to expectation or to chance even for an interim period. They were still meeting it at the present time, and for some time to come, by subsidised building by the local authorities. There had been approved, and were now or should very shortly be under construction with subsidy under the Wheatley Act, 41,000 more houses, as many as we had in September, 1932, the result of the proviso to Section 1 of the Act of 1933, which enables the Ministry to accept for subsidy any schemes of local authorities for meeting their local housing needs that were substantially ready for submission when the Act passed. So the situation was that the present needs of the country for small houses to let and its needs for some time to come were in fact being met, and would be met, with the help of subsidy.

Local authorities had made to him (the Minister) proposals contemplating guarantees for 13,000 houses under the Housing (Financial Provisions) Act, 1933.

SOCIETIES & INSTITUTIONS

R.I.B.A.

FOLLOWING are notes from the minutes of the Council meeting held on November 6 :—

The Fellowship.—The Council, by a unanimous vote, elected the following architects to the Fellowship under the powers defined in the Supplemental Charter of 1925 :—Mr. J. F. Hennessy (Sydney), Mr. W. J. W. Forbes (Perth, W. Australia).

Election of Students.—The following Probationers were elected as Students of the R.I.B.A. :—R. G. Bell (special exemption), D. M. Dodd (Univ. of Liverpool), M. J. H. Goodchild (special exemption), C. J. Jerram (Northern Poly.), S. E. Malins (Birmingham Sch. of Arch.), J. H. Napper (Univ. of Manchester), Patricia J. Owen (A.A.), Denise M. L. Roberts (A.A.), H. P. H. Shepherd (A.A.), E. J. L. C. Steen (Armstrong College, Newcastle-on-Tyne.

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"ONE-PIPE" DRAINAGE

Chadwick "Bossom Gift" Lecture.

A SYMPOSIUM on "The One-Pipe System of House Drainage in Theory and Practice" was given by Dr. Charles Porter, President of the Society of Medical Officers of Health, and Mr. W. H. Draper, sanitary inspector, Metropolitan Borough of St. Marylebone, at the London School of Hygiene and Tropical Medicine, on November 21.

Though commonly described as "new," the one-pipe system, said Dr. Porter, had actually nothing particularly new about it. Since in its construction there were many more than one pipe, it was doubtful if the description "one-pipe," though convenient, was quite accurate. In tracing the history of the development of the system—which was coming to be more and more frequently employed in the drainage of large buildings such as hotels and blocks of flats in the Metropolis—the speaker showed that in all probability it was the only system in the early days of sanitation. Largely it was because defective drainage was accounted responsible for outbreaks of enteric and other fevers that demand for improved sanitation was made. The schemes devised sought to keep drain emanations from entering buildings by insisting that all drains should, as far as possible, be outside the premises; that the different classes of wastes should be kept separate, and a complete and complicated scheme of trapping employed. In this way there grew up what might be described as the British standard multiple-pipe system. With increased demand for sanitary appliances of all sorts, and in the case of hotels and more expensive flats for bathrooms *en suite* with sleeping rooms, the older system was inapplicable. In America, certain European countries and the East this was recognised many years ago, and to-day practically nowhere else but in Britain was anything but the one-pipe system or some modification of it seen in hotels and flats, and even ordinary dwelling-houses. Climate might have had something to do with this development, but undoubtedly also it implied recognition of the need for sanitary advance, much of which had been based upon research and experimentation. In London the London County Council, as the by-law-making authority, had in course of preparation by-laws approving the introduction of the system. Already, however, certain London Borough Councils, conspicuously the St. Marylebone Borough Council, had waived existing requirements and permitted the adoption of the scheme for hotels and large blocks of flats. From the point of view of hygiene there appeared to be no question that the system had advantages, and on grounds of economy there seemed a certainty that it had very real claims also.

Mr. W. H. Draper said there had been a sharp divergence of opinion as to whether the one-pipe system was an improvement on the present system, or a retrograde step. Sanitary plumbing had entirely altered in the last 50 years. Fittings had been improved beyond recognition: materials and particularly the methods of jointing pipes, other than lead, had completely changed. Our knowledge to-day of pneumatics was such that our sanitary engineers could design installations that could meet any and all of the arguments that might be raised against the one-pipe or combined system of drainage. It would be conceded from the point of view of cost, saving of space and simplicity in design, that the one-pipe system would be of advantage in many of the larger buildings, particularly those with a number of varied fittings. Architects generally would welcome the alternative to existing requirements, but it would not necessarily follow that it would simplify their planning, for if full advantage were to be taken of the system, they would need to group their fittings, since it was not advisable to have long branch wastes, with correspondingly long vents, serving fittings situated a distance from the main stack. Its benefits, however, did not need to be confined to the large buildings.

Amongst the other factors to be taken into consideration were the height of the buildings and the number of fittings at each floor and their probable use. Those figures must be ascertained and tables framed. A factor of safety was required, but that should not necessitate insistance on the installation of pipes much larger than would be required. The size of the pipes or depth of the water seal in traps might be increased until the system was overburdened with unnecessary safeguards. The metal most suitable for the various pipes would depend, in a measure, on where they were to be fixed and the work they would have to do. Coated cast-iron, copper, lead and galvanised wrought iron all had, in turn, their separate advantages or attributes. There was very considerable variation in the effects of corrosion on different metals and pipes. Coated cast-iron resisted corrosion and rust very much better than galvanised wrought iron. It would appear, therefore, that until the plumber had acquired the necessary skill required to weld large copper pipes, the main soil would be constructed in heavy cast-iron.

Installation Data.

Excepting the craftsman, no one wished to see the pipes after installation, and the architect strove, and, in most cases, insisted on their being concealed. This was commendable from an æsthetic point of view, but there were other equally important points to consider. Modern buildings with solid floors and partitions presented a problem when one proceeded to instal the waste and vent pipes. We might consider the fittings in a bathroom first, said the lecturer, for they were at times somewhat difficult to drain perfectly. The waste from the bath would be either in the thickness of the floor or just above it. If the low type of bath was used, rolled steel joists should be kept out of the way. The bath waste usually presented more difficulties than other fittings, the fall of this branch to the waste stack often being nominal. It was very desirable that the vent to that branch should rise vertically from the point of connection to the waste. To obtain this, the branch waste should turn towards the foot or the side of the bath, and not parallel with, and under, the bath towards the head; the vent pipe should be taken off the top and never off the side of the waste pipe. Any vent taken from a horizontal branch waste of considerable length was liable to be submerged when the waste pipe was running full and gradually to become clogged. Therefore, a horizontal waste from any fitting should be discouraged; a better method was to use a P-trap with a short branch discharging into a vertical pipe, which could then be taken to the main stack at floor level. When possible the vent from fittings should be a direct extension of the vertical waste, so that any scale or solid falling down the vent would pass into the waste and be washed away, and thus prevent stoppage that might occur with the passing of time. The vent from the lavatory basin should rise above the overflow line of the basin in such a manner that it could not be used as a waste pipe. As to the position of fittings, particularly in the bathroom, the best arrangement was to have the lavatory basin at the top end of a branch that took both bath and basin. That ensured a fully protected, washed vent to the bath, in that the discharge from the lavatory basin would always keep that vent open, and with the lavatory basin waste connected in the manner previously indicated, that branch was fully protected. It might be considered safer to omit the branch vent to the bath connection, but he did not think the 1½ gallon discharge from the basin would affect the 3 in. seal of the bath connected to the horizontal waste. If the positions of bath and lavatory basin were transposed, there was a possibility that the venting might not be quite so perfect.

It would appear that one of the main questions exercising the minds of architects and sanitary engineers who wished to instal the one-pipe system of drainage was on what basis should they determine the relation that the size of the soil should bear to that of the vent, having regard to the work they would have to do. It was stated in the American publication, "Minimum Requirements for Plumbing," that "it is sufficient to provide a 4 in soil pipe 280 ft. in length with a 2 in. vent pipe, and that with this size of vent the 4 in. pipe will safely take the discharge from 48 sanitary groups, each consisting of w.c., with a 5-gallon flush, and bath, lavatory basin and sink." It would appear better practice to connect the vent pipe to the soil pipe at a point below the lowest fitting, and to continue the vent up independently, and not return it into the stack above the topmost fitting. The air in plumbing systems changes each time a fixture was used. Excessive pressure was caused by water falling from a considerable height, carrying the air above it to a point where the air, attempting to fight its way back through the various branches, created a pressure, which would go along the line of least resistance and escape through the outlets in the soil line. This was more marked at the lower levels of the system. Air was rarefied at the top of the soil pipe, due to the fact that the air might not always replace the air quickly enough that had been carried ahead of the water falling. In other words, at the top of the soil pipe the air pressure was diminished, and when that occurred the water seal of the traps would be drawn, unless properly ventilated. It was the sanitary engineer's job to see that at all points in main soil and waste branches the air was about evenly balanced. The only way to do that was to provide traps with a vent pipe to supply air where the air had been rarefied and to take away the air where excessive air pressure had been created. There was one point that was worth consideration. It was at the point of the change of direction, vertical to lateral, that the greatest disturbance took place, and, assuming that a stack was taking away 60 water closets, although the trap at this point might not, and should not, siphon out, "waving" might take place with a slight loss of seal. That could be obviated in a degree by a much larger anti-siphonage pipe or by the fixing of a siphonic closet with its much deeper seal. It was not only a question of pipe size; the lay-out was important, and more care must be exercised with the branch wastes and vents, particularly the point and method of connection. A vent badly designed would not cope with the conditions, and, if it became choked, was useless. It was essential that that vent connection should be made correctly, for it was at that point that a stoppage was more liable to occur than at any other.

The depth of water that would be required for the traps of fittings had received very careful consideration, and the decision of the L.C.C. on the point was now awaited. It would probably be in the neighbourhood of 2½ in. to 3 in. Every trap to a waste fitting should have adequate means for inspection and cleansing, as provided in our present by-laws. He would suggest that it be made compulsory to have that access cap below the water level of the water seal: such a provision would ensure that it must be kept water-tight, though it would be somewhat difficult to obtain this with the trap to the bath, owing to the fact that it would often be below the floor level. It was agreed that all plumbing work should be sound, and certain organisations had expressed the opinion that the only operatives permitted to instal this work should be qualified to do so by examination. Allowing for a reasonable time to elapse before its application, it might well be considered advisable in Great Britain. He thought the public were entitled to expect that degree of skill which would ensure that the work executed was not a danger to the health of the occupants of a building. That observation applied to all sanitary work.

The symposium was appropriately presided over by Mr. Alfred C. Bossom, M.P.

BUILDING CONTRACT: ARBITRATION

In our "Notes on Current Law Cases" for July 28, we made a brief reference to the case, F. R. Absolom *v.* Great Western (London) Garden Village Society, Ltd., in which an important point was raised in connection with a building contract. The case is now fully reported in the Law Reports (1933, A.C. 592), and the decision of the House of Lords requires careful consideration. The appellants were contractors, who in November, 1928, had entered into a contract with the respondents for the erection of twenty-four houses. In the report the parties are referred to respectively as "the Contractor" and "the Employer." We are compelled to set out condition 30 of the contract in full as that is most material:—

"The contractor shall be entitled, upon the valuation of the surveyor and under the certificates to be issued by the architect to contractor, and within 14 days of the date of each certificate, to payment by the employer from time to time by instalments when, in the opinion of the architect, actual work to the value of £1,000 has been executed in accordance with the contract at the rate of 90 per cent. of the value of the work so executed in the building and materials actually on the site for use on the works until the balance in hand amounts to the sum of £2,000, after which time the instalments shall be up to the full value of the work subsequently executed. The contractor shall be entitled, under the certificate to be issued by the architect, to receive payment of £1,000, being a part of the said sum of £2,000 when the works are practically completed, and in like manner to payment of the balance within a further period of six months, or as soon after the expiration of such period of six months as the works shall have been finally completed and all defects made good according to the true intent and meaning hereof, whichever shall last happen. The architect shall issue his certificates in accordance with this clause."

There was an arbitration clause, and a clause (26) which provided that if the contractors should suspend work, except in the case of a certificate withheld, the architect was empowered to give notice to proceed with the work, disregard of such notice involving certain consequences.

About March, 1929, a dispute arose between the parties. Up to and including March 11, certificates had been issued for £9,434 and been paid to the contractor, but the contractor claimed that under the contract a larger sum was due, and on the employer denying this, and even alleging that the contractor had received more than was due, the contractor stopped work, and the employer issued a notice requiring him to proceed with the work. Arbitration was then resorted to, and in the notice required by the arbitration clause the disputes submitted were: (1) the issue of certificates, and (2) the validity of the notice served under clause 26 as to proceeding with the works after suspension by the contractor.

The arbitrator found that up to and including March 11, 1929, the net value of work for certification, after deducting the 10 per cent. retention provided for by clause 30, amounted to £10,227 17s. 10d., and the amounts certified for payment were £9,434. This, it will be seen, left a balance due of £793 17s. 10d., but he made no award for this sum, as he construed clause 30 as though the reference therein to actual work to the value of £1,000 continued to operate throughout, and as though until a balance due amounted to that sum no certificate was due; whereas the true construction of the clause, as given by the House of Lords, is that the words "when in the opinion of the architect actual work to the value of £1,000 has been executed in accordance with the contract" merely refer to, and define, the point of time before which no certificate can be given; and after that point of time the contractor is entitled to certificates covering the true value of the work executed in accordance with the contract and the materials actually on the site for use on the works.

Thus the House found that the arbitrator had misconstrued clause 30 and thereby erred in law, and that he should have revised the last certificate given in such a way as to entitle the contractor to payment of the additional sum of £793 17s. 10d., and it followed that those portions of the award which dealt under clause 26 with the notice to the contractor to proceed with the work, and condemned the contractor in costs, also could not stand.

So far we have only dealt with the contract and the award and the error in it, but the question also had to be considered by the House whether the submission to the arbitrator was such that his award could not be interfered with. A Divisional Court had held that the award was unintelligible and had ordered it to be referred back to the arbitrator for reconsideration. The Court of Appeal set aside the order of the Divisional Court on the ground that the arbitrator, having been selected to decide a question of construction, his decision could not be questioned. The House of Lords found the award intelligible, but that there was an error in law upon the face of it, and after a careful consideration of the decided cases upon the point whether or not the award could be interfered with, held that this was not a case where a specific question of law had been referred to the decision of the arbitrator, in which case no interference is possible, even if the decision is erroneous; but that it fell within that class of cases where in considering the matters referred to arbitration a question of construction arises material to the matter, in which case interference with the award is permitted. Lord Russell of Killowen explained the matter as regards this case as follows:—The primary dispute in this case was whether, if the value of the work executed and the materials on the site up to March 11 had been truly assessed, the net value available for certification on that date was in excess of or less than the amount which had actually been certified. Those were the questions which were in general terms submitted to the arbitrator, and no specific question of construction or of law was submitted; the parties had, however, been ordered to deliver pleadings, and by the statement of claim the contractor had claimed that the arbitrator under his powers should revise the last certificate to include the excess net value which he alleged was due. It was at this point that the question of construction of clause 30 arose as a question of law, not specifically submitted, but material to the decision of matters already submitted.

NEW PUBLIC WORKS

Andover.

Mr. F. Henshaw, L.R.I.B.A. Westminster Bank Chambers, Andover, has prepared plans for the erection of Council Offices for the R.D.C. Tenders are now invited, returnable by December 7.

Cardiff.

Mr. G. H. Whitaker, City Engineer, has prepared plans for the erection of an office building in the quadrangle of the City Hall, to cost £5,000.

Gravesend.

Tenders, returnable by December 9, are invited for the erection of new blocks of conveniences at Church-street Council schools for the Education Committee of the Corporation. Mr. J. G. Bennett is the borough architect.

Liverpool.

Tenders are invited by the T.C. for 156 dwellings at Trowbridge-street, returnable by December 20.

Llandudno.

A bathing pool, estimated to cost £30,000, is proposed. The Council are in process of selecting an architect.

Oldham.

A bandstand is proposed in Alexandra Park by the C.B., to plans by the Borough Engineer. Tenders, returnable by December 11, are now invited.

Peterborough.

H.M.O.W. invite tenders for the erection of an employment exchange, returnable by December 19.

Portsmouth.

The Corporation is to proceed with the construction of a £50,000 swimming pool—part of a larger scheme for the development of the Lumps Fort site as an amusement centre.

Ryde.

The town hall, recently injured by fire, is to be reconstructed, to plans by Messrs. Eiloart, Son and Inman, 40, Chancery-lane, W.C.2.

Wigan.

H.M.O.W. invite tenders for the erection of an employment exchange, returnable by December 21.

Wood Green.

The Corporation invite applications, by December 9, from builders for the erection of an open-air swimming pool, etc., at Durnsford-road. Plans are by Mr. R. H. Matthews, A.M.Inst.C.E., Town Hall, N.22.

WEST YORKSHIRE SOCIETY OF ARCHITECTS.

Mr. B. R. Gribbon, president, took the chair at a meeting of this Society, when a lecture on "The Satellite Town" was given by Mr. A. W. Kenyon, F.R.I.B.A., architect to Welwyn Garden City, who said that if workpeople were to be housed in the centre of cities, then the factories must be placed there as well. But there was no room for them there, and that brought them to a solution of the problem, viz.: the satellite town formed to relieve the congestion of our large cities, which had mostly grown in a casual manner without plan or thought for to-morrow, until they had simply become a solid congestion of houses, offices, and factories. The entirely self-contained satellite town was the idea of Ebenezer Howard, who, however, did not live to see his dream fully realised, as at Welwyn. The more they tried to spread out existing cities the greater became the transport difficulty, and therefore decentralisation of industry was the natural sequence. In Italy they were in front of us. No factory employing more than 100 people could be started in any city of more than 100,000 inhabitants without special permission. Following the example of Welwyn, Manchester had begun to form a satellite town at Wythenshawe, where no buildings were placed alongside the main avenues, but were set back on subsidiary roads, with park spaces running parallel to them.

The lecturer, after showing upon the screen many views illustrative of such towns, said there could be no doubt that the planning of satellite towns gave great scope to architects, who should band themselves together and see that such matters were not left wholly in the hands of legislators.

GLASGOW SCHOOL OF ARCHITECTURE.

Speaking at the prize-giving ceremony of the Glasgow School of Architecture, Mr. Robert Robertson complimented the students upon the excellent report received by the Assessor on the examinations of the season. He specially congratulated them because members of the school had obtained three out of four of the principal prizes awarded by the Royal Incorporation of Architects in Scotland. The Leslie A. Hamilton Memorial Studentship (£50) and medal was won by Ronald M. W. Young, Troon, and James A. Carrick, Alloway, secured the Bordon Memorial Studentship (valued at £35). Minor travelling studentships of £10 each were gained by James M. Billing, Bearsden, and William W. Hillhouse, Glasgow.

"ONE-PIPE" DRAINAGE

Chadwick "Bossom Gift" Lecture.

A SYMPOSIUM on "The One-Pipe System of House Drainage in Theory and Practice" was given by Dr. Charles Porter, President of the Society of Medical Officers of Health, and Mr. W. H. Draper, sanitary inspector, Metropolitan Borough of St. Marylebone, at the London School of Hygiene and Tropical Medicine, on November 21.

Though commonly described as "new," the one-pipe system, said Dr. Porter, had actually nothing particularly new about it. Since in its construction there were many more than one pipe, it was doubtful if the description "one-pipe," though convenient, was quite accurate. In tracing the history of the development of the system—which was coming to be more and more frequently employed in the drainage of large buildings such as hotels and blocks of flats in the Metropolis—the speaker showed that in all probability it was the only system in the early days of sanitation. Largely it was because defective drainage was accounted responsible for outbreaks of enteric and other fevers that demand for improved sanitation was made. The schemes devised sought to keep drain emanations from entering buildings by insisting that all drains should, as far as possible, be outside the premises; that the different classes of wastes should be kept separate, and a complete and complicated scheme of trapping employed. In this way there grew up what might be described as the British standard multiple-pipe system. With increased demand for sanitary appliances of all sorts, and in the case of hotels and more expensive flats for bathrooms *en suite* with sleeping rooms, the older system was inapplicable. In America, certain European countries and the East this was recognised many years ago, and to-day practically nowhere else but in Britain was anything but the one-pipe system or some modification of it seen in hotels and flats, and even ordinary dwelling-houses. Climate might have had something to do with this development, but undoubtedly also it implied recognition of the need for sanitary advance, much of which had been based upon research and experimentation. In London the London County Council, as the by-law-making authority, had in course of preparation by-laws approving the introduction of the system. Already, however, certain London Borough Councils, conspicuously the St. Marylebone Borough Council, had waived existing requirements and permitted the adoption of the scheme for hotels and large blocks of flats. From the point of view of hygiene there appeared to be no question that the system had advantages, and on grounds of economy there seemed a certainty that it had very real claims also.

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Amongst the other factors to be taken into consideration were the height of the buildings and the number of fittings at each floor and their probable use. Those figures must be ascertained and tables framed. A factor of safety was required, but that should not necessitate insistance on the installation of pipes much larger than would be required. The size of the pipes or depth of the water seal in traps might be increased until the system was overburdened with unnecessary safeguards. The metal most suitable for the various pipes would depend, in a measure, on where they were to be fixed and the work they would have to do. Coated cast-iron, copper, lead and galvanised wrought iron all had, in turn, their separate advantages or attributes. There was very considerable variation in the effects of corrosion on different metals and pipes. Coated cast-iron resisted corrosion and rust very much better than galvanised wrought iron. It would appear, therefore, that until the plumber had acquired the necessary skill required to weld large copper pipes, the main soil would be constructed in heavy cast-iron.

Installation Data.

Excepting the craftsman, no one wished to see the pipes after installation, and the architect strove, and, in most cases, insisted on their being concealed. This was commendable from an æsthetic point of view, but there were other equally important points to consider. Modern buildings with solid floors and partitions presented a problem when one proceeded to instal the waste and vent pipes. We might consider the fittings in a bathroom first, said the lecturer, for they were at times somewhat difficult to drain perfectly. The waste from the bath would be either in the thickness of the floor or just above it. If the low type of bath was used, rolled steel joists should be kept out of the way. The bath waste usually presented more difficulties than other fittings, the fall of this branch to the waste stack often being nominal. It was very desirable that the vent to that branch should rise vertically from the point of connection to the waste. To obtain this, the branch waste should turn towards the foot or the side of the bath, and not parallel with, and under, the bath towards the head; the vent pipe should be taken off the top and never off the side of the waste pipe. Any vent taken from a horizontal branch waste of considerable length was liable to be submerged when the waste pipe was running full and gradually to become clogged. Therefore, a horizontal waste from any fitting should be discouraged; a better method was to use a P-trap with a short branch discharging into a vertical pipe, which could then be taken to the main stack at floor level. When possible the vent from fittings should be a direct extension of the vertical waste, so that any scale or solid falling down the vent would pass into the waste and be washed away, and thus prevent stoppage that might occur with the passing of time. The vent from the lavatory basin should rise above the overflow line of the basin in such a manner that it could not be used as a waste pipe. As to the position of fittings, particularly in the bathroom, the best arrangement was to have the lavatory basin at the top end of a branch that took both bath and basin. That ensured a fully protected, washed vent to the bath, in that the discharge from the lavatory basin would always keep that vent open, and with the lavatory basin waste connected in the manner previously indicated, that branch was fully protected. It might be considered safer to omit the branch vent to the bath connection, but he did not think the 1½ gallon discharge from the basin would affect the 3 in. seal of the bath connected to the horizontal waste. If the positions of bath and lavatory basin were transposed, there was a possibility that the venting might not be quite so perfect.

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There was an arbitration clause, and a clause (26) which provided that if the contractors should suspend work, except in the case of a certificate withheld, the architect was empowered to give notice to proceed with the work, disregard of such notice involving certain consequences.

About March, 1929, a dispute arose between the parties. Up to and including March 11, certificates had been issued for £9,434 and been paid to the contractor, but the contractor claimed that under the contract a larger sum was due, and on the employer denying this, and even alleging that the contractor had received more than was due, the contractor stopped work, and the employer issued a notice requiring him to proceed with the work. Arbitration was then resorted to, and in the notice required by the arbitration clause the disputes submitted were: (1) the issue of certificates, and (2) the validity of the notice served under clause 26 as to proceeding with the works after suspension by the contractor.

The arbitrator found that up to and including March 11, 1929, the net value of work for certification, after deducting the 10 per cent. retention provided for by clause 30, amounted to £10,227 17s. 10d., and the amounts certified for payment were £9,434. This, it will be seen, left a balance due of £793 17s. 10d., but he made no award for this sum, as he construed clause 30 as though the reference therein to actual work to the value of £1,000 continued to operate throughout, and as though until a balance due amounted to that sum no certificate was due; whereas the true construction of the clause, as given by the House of Lords, is that the words "when in the opinion of the architect actual work to the value of £1,000 has been executed in accordance with the contract" merely refer to, and define, the point of time before which no certificate can be given; and after that point of time the contractor is entitled to certificates covering the true value of the work executed in accordance with the contract and the materials actually on the site for use on the works.

Thus the House found that the arbitrator had misconstrued clause 30 and thereby erred in law, and that he should have revised the last certificate given in such a way as to entitle the contractor to payment of the additional sum of £793 17s. 10d., and it followed that those portions of the award which dealt under clause 26 with the notice to the contractor to proceed with the work, and condemned the contractor in costs, also could not stand.

So far we have only dealt with the contract and the award and the error in it, but the question also had to be considered by the House whether the submission to the arbitrator was such that his award could not be interfered with. A Divisional Court had held that the award was unintelligible and had ordered it to be referred back to the arbitrator for reconsideration. The Court of Appeal set aside the order of the Divisional Court on the ground that the arbitrator, having been selected to decide a question of construction, his decision could not be questioned. The House of Lords found the award intelligible, but that there was an error in law upon the face of it, and after a careful consideration of the decided cases upon the point whether or not the award could be interfered with, held that this was not a case where a specific question of law had been referred to the decision of the arbitrator, in which case no interference is possible, even if the decision is erroneous; but that it fell within that class of cases where in considering the matters referred to arbitration a question of construction arises material to the matter, in which case interference with the award is permitted. Lord Russell of Killowen explained the matter as regards this case as follows:—The primary dispute in this case was whether, if the value of the work executed and the materials on the site up to March 11 had been truly assessed, the net value available for certification on that date was in excess of or less than the amount which had actually been certified. Those were the questions which were in general terms submitted to the arbitrator, and no specific question of construction or of law was submitted; the parties had, however, been ordered to deliver pleadings, and by the statement of claim the contractor had claimed that the arbitrator under his powers should revise the last certificate to include the excess net value which he alleged was due. It was at this point that the question of construction of clause 30 arose as a question of law, not specifically submitted, but material to the decision of matters already submitted.

NEW PUBLIC WORKS

Andover.

Mr. F. Henshaw, L.R.I.B.A. Westminster Bank Chambers, Andover, has prepared plans for the erection of Council Offices for the R.D.C. Tenders are now invited, returnable by December 7.

Cardiff.

Mr. G. H. Whitaker, City Engineer, has prepared plans for the erection of an office building in the quadrangle of the City Hall, to cost £5,000.

Gravesend.

Tenders, returnable by December 9, are invited for the erection of new blocks of conveniences at Church-street Council schools for the Education Committee of the Corporation. Mr. J. G. Bennett is the borough architect.

Liverpool.

Tenders are invited by the T.C. for 156 dwellings at Trowbridge-street, returnable by December 20.

Llandudno.

A bathing pool, estimated to cost £30,000, is proposed. The Council are in process of selecting an architect.

Oldham.

A bandstand is proposed in Alexandra Park by the C.B., to plans by the Borough Engineer. Tenders, returnable by December 11, are now invited.

Peterborough.

H.M.O.W. invite tenders for the erection of an employment exchange, returnable by December 19.

Portsmouth.

The Corporation is to proceed with the construction of a £50,000 swimming pool—part of a larger scheme for the development of the Lumps Fort site as an amusement centre.

Ryde.

The town hall, recently injured by fire, is to be reconstructed, to plans by Messrs. Eiloart, Son and Inman, 40, Chancery-lane, W.C.2.

Wigan.

H.M.O.W. invite tenders for the erection of an employment exchange, returnable by December 21.

Wood Green.

The Corporation invite applications, by December 9, from builders for the erection of an open-air swimming pool, etc., at Durnsford-road. Plans are by Mr. R. H. Matthews, A.M.Inst.C.E., Town Hall, N.22.

WEST YORKSHIRE SOCIETY OF ARCHITECTS.

Mr. B. R. Gribbon, president, took the chair at a meeting of this Society, when a lecture on "The Satellite Town" was given by Mr. A. W. Kenyon, F.R.I.B.A., architect to Welwyn Garden City, who said that if workpeople were to be housed in the centre of cities, then the factories must be placed there as well. But there was no room for them there, and that brought them to a solution of the problem, viz.: the satellite town formed to relieve the congestion of our large cities, which had mostly grown in a casual manner without plan or thought for to-morrow, until they had simply become a solid congestion of houses, offices, and factories. The entirely self-contained satellite town was the idea of Ebenezer Howard, who, however, did not live to see his dream fully realised, as at Welwyn. The more they tried to spread out existing cities the greater became the transport difficulty, and therefore decentralisation of industry was the natural sequence. In Italy they were in front of us. No factory employing more than 100 people could be started in any city of more than 100,000 inhabitants without special permission. Following the example of Welwyn, Manchester had begun to form a satellite town at Wythenshawe, where no buildings were placed alongside the main avenues, but were set back on subsidiary roads, with park spaces running parallel to them.

The lecturer, after showing upon the screen many views illustrative of such towns, said there could be no doubt that the planning of satellite towns gave great scope to architects, who should band themselves together and see that such matters were not left wholly in the hands of legislators.

GLASGOW SCHOOL OF ARCHITECTURE.

Speaking at the prize-giving ceremony of the Glasgow School of Architecture, Mr. Robert Robertson complimented the students upon the excellent report received by the Assessor on the examinations of the season. He specially congratulated them because members of the school had obtained three out of four of the principal prizes awarded by the Royal Incorporation of Architects in Scotland. The Leslie A. Hamilton Memorial Studentship (£50) and medal was won by Ronald M. W. Young, Troon, and James A. Carrick, Alloway, secured the Bordon Memorial Studentship (valued at £35). Minor travelling studentships of £10 each were gained by James M. Billing, Bearsden, and William W. Hillhouse, Glasgow.

AGGREGATES FOR CONCRETE WORK

A PAPER on this subject was read by Dr. Bernard H. Knight, D.Sc., Ph.D. (Lond.), Assoc.M.Inst.C.E., at a sessional meeting at Caxton Hall, Westminster, on October 20, of the Institution of Sanitary Engineers. The requirements for concrete aggregates were as follows, said the lecturer :—(a) *Mass Concrete Work.*—An aggregate for this purpose must be clean, angular, and free from tendencies to chemical and physical changes. As regards strength, it was clear that the requirements need not be so stringent as in classes (b) and (c) below—*i.e.*, broken brick of good quality was quite suitable for the purpose, although it would not be considered so for road surfacings.

(b) *Reinforced Concrete Work.*—Here, it was suggested, only natural rocks of a tensile strength at least equal to that of Portland cement mortar (three parts of sand to one of cement), as laid down in the British standard specification No. 12 of 1931 at 375 lb. per square inch, should be used; though, if broken brick could be obtained which would show uniformly such a strength, it also would be suitable. The question of resistance was important in reinforced concrete work.

(c) *Concrete Road Surfacings.*—In addition to the desiderata given above, in this case the aggregate should comply with both the abrasion and the Page impact test. The lecturer suggested that the figure 18 should be taken as a minimum in both tests. In this class, the question of resistance to fire was unlikely to arise, at any rate on a large scale; while in all three uses it was clear that the lighter the weight of the aggregate, the lower its cost, other things being equal.

In this connection, the results of tests of some well-known types of aggregate were given as follows :—

SHOWING THE PHYSICAL PROPERTIES OF SOME WELL-KNOWN TYPES OF AGGREGATES.

Name.	Quarry.	Percentage Loss of Weight. Dry.	Percentage Loss of Weight. Wet.	Abrasion.	Impact.	Absorption of water per cubic foot.	Specific Gravity.
Granite ...	Sclattie	3.4	3.8	18.9	12	0.12	2.61
Dolerite ...	Penmaenmawr ...	3.12	4.78	19.0	23	0.11	2.81
,, ...	Ravelrig	8.59	17.53	17.0	15	1.64	2.73
,, ...	Hillhouse	6.59	12.35	18.7	19	0.04	3.03
Quartzite ...	Crookhaven ...	1.6	2.3	19.0	15	0.31	2.69
Sandstone ...	Betteshanger ...	4.9	8.8	18.2	15	0.96	2.63
Flint ...	—	10.1	16.5	19.9	20	0.33	2.53
Limestone ...	Abbots Leigh ...	10.55	23.68	14.5	7	0.23	2.70
,, ...	Wickwar	3.5	6.9	18.3	14	0.71	2.70
Slag ...	—	8.01	14.35	18.0	8	0.33	2.91

The crushing tests appertaining to the above types had been purposely omitted from the table, as in the opinion of the author (an opinion shared by many other research workers) the test was often exceedingly misleading, and, in addition, unimportant from the present viewpoint. The deval test (percentage loss of weight) must also be interpreted with caution, as it was really a combination of an abrasion and an impact test.

Qualities of Natural Products.

Granites.—Considering again our three main uses for concrete, it could be said that for mass concrete work the vast majority of granites were quite suitable. They were also suitable for concrete road surfaces, providing that they fell within the limits of abrasion and attrition set out. They broke with a rough, hackly fracture, and yielded a clean, durable aggregate for this class of use.

Most granites suffered from the occurrence of a series of minute fissures, seldom visible to the naked eye, and only seen in thin section after the application of special staining methods. Passing on to consider granite as an aggregate for reinforced concrete construction, reference may be made to Special Report No. 8 of the Building Research Station, "Fire Resistant Construction," page 6; there occurred an expansion almost instantaneously at 575 deg. C., due to a change in the constituent of the quartz.

Dolerites.—Here again, provided that the usual physical tests were complied with, the dolerite class included many aggregates suitable for mass concrete, reinforced concrete, and road surfacings; but recent work privately communicated by the Building Research Station, acting in conjunction with the Cast Concrete Products Association, had shown that some dolerites contained certain minerals, variants of the olivine class, which were markedly deleterious for use in concrete work, as they oxidised rapidly, the change being accompanied by an increase in volume.

Further experiments by the Building Research Station, and also by the speaker and Mr. Wilfrid Pickering, showed that, under the action of fire, dolerites tended to fuse rather than to disintegrate. Such dolerites as Rowley Regis and Clee Hill were known to be suitable for use as fine aggregates in fire-resistant construction.

Quartzites and Sandstones.—These stones were conveniently considered together, though the former were more compact and of a higher strength than were the latter. Having regard to the physical properties of quartz already referred to, it had been shown (see page 42 of Special Report No. 8 of the Building Research Station) that dolerite was preferable to quartz sand as fine aggregate in fire resistant construction; and those remarks would doubtless apply to the use of quartzose rocks as coarse aggregates. Some sandstones showed up poorly under physical tests when considered for roadwork, but the majority were, no doubt, suitable for use in mass concrete.

Flints.—Flints were not, in the opinion of the speaker, the equal of a high-class dolerite of granite-porphyry, at any rate for road surfacing uses, as they frequently showed a low figure under an impact test. They were also well-rounded, unless crushed before use, and splintered under the action of fire. But they were suitable in every way for use in mass concrete, or for reinforced concrete which was unlikely to become affected by fire.

Limestones.—Even the hardest limestones appeared to be too soft to be satisfactory as a wearing surface in concrete roads. In any case, they could not be regarded as coming within the category of a fire-resistant material.

Qualities of Artificial Products.

Slag.—Slag is a by-product obtained during the operation of blast-furnaces, most of the slags in use as aggregates being iron slags. Slag was extremely variable in both its chemical and mineralogical composition, and, in the opinion of the speaker, should not be used, even as an aggregate for mass concrete, unless the material had first been crushed, granulated, and then exposed to the action of the weather for a considerable time. As regarded reinforced concrete construction, the material had long been banned by the London County Council, whose practice might be regarded as setting the standard in building matters throughout the country, as had also limestone; while the Building Research Station mentioned that glassy slags appear to be unstable, even when used as a fine aggregate.

Clinker.—This material, together with such substances as coke breeze, pan breeze, etc., had long been used as an aggregate where lightness of weight was a prime consideration. The British Standards Institution had now issued a new British Standard Specification (No. 492 of 1933), for pre-cast concrete partition slabs, which embodied tests, not only for the slabs themselves, but for the clinker aggregate used therein. These latter tests limited the combustible content of the clinker to 24 per cent., and also included a cement-plaster of Paris "pat test" for soundness. The London County Council, in their recently issued Building Code, now prohibited the use of furnace residues of any kind in contact with steel work. The experimental work of the British Fire Prevention Committee in 1918-1921 showed that reinforced concrete slabs of coke breeze, pan breeze and clinker could not be classed as fire-resistant materials, although they had matured for twelve months before being tested. It was not, of course, suggested that clinker was unsuitable for such use as in breeze concrete slabs for internal building work; but in that case the risk of disintegration was greatly lessened by the application of a dense, stable plaster on both sides of the slabs, which had the effect of keeping air and moisture out of them.

Broken Brick.—One was hampered, in discussing this material, by lack of quantitative physical data at the present time; and although a high quality brick aggregate might be thought suitable for use in mass concrete, it must be ruled out, in the present state of knowledge, for use in road surfacings. As regarded reinforced concrete work, it possessed certain advantages (a rough texture, chemical and physical stability, and possibly cheapness). To quote again the Building Research Station, clean, well-burnt, strong brick was required, while from a fire-resistant point of view, bricks heated to 1,100 deg. to 1,200 deg. C. (probably the normal temperature of burning) were usually sufficiently vitreous to be free from deleterious moisture expansions, and were consequently remarkably resistant to fire. The presence of quartz in such bricks was, as had already been shown, undesirable; but clay products of that kind, including in this term terra-cotta, were probably the best fire-resisting aggregates at present available.

LIGHTING SERVICE

The fifth lecture in the Illumination Design Course was delivered at the Lighting Service Bureau, 2, Savoy Hill, W.C.2, on November 13, when Mr. Sutherland, dealing with the subject of architectural lighting, showed how early experiments had become rationalised into generally acceptable forms. In defining the term "Architectural Lighting," the speaker said that architectural lighting comprised any systems of lighting which utilise luminous or illuminated surfaces as an essential part of the design of buildings and where their requisite lighting equipment was either built into or onto the structure as an integral part thereof.

The discussion was opened by Mr. F. R. Yerbury, director of the Building Centre, who said that in the past lighting had often ruined an architectural scheme, and to-day, although architecture was in a very transient stage, great strides had been made towards achieving designs that were both functional and æsthetically satisfying. He looked forward to the day when the manufacturers and designers of fittings would be guided by the trend of architecture instead of basing their ideas on Edwardian relics.

Mr. W. J. Jones, manager of the bureau, referring to one of Mr. Sutherland's demonstrations, said that when people spoke of shadows they really meant brightness contrast. That point was more important than it seemed, and it was a subject to which architects and lighting engineers were paying increasing attention. There was still a great deal of preaching to be done by architects already enlightened among those of their brethren who were still struggling in outer darkness.

THE INQUIRY BUREAU

QUESTIONS.

Extending a Church Hall.

SIR,—It is proposed to extend a church hall as cheaply as efficiency will permit. The width is 36 ft. in the clear. The present roof is understood to be of timber with a lined ceiling. As regards the extension, it is desired to employ wood, but to avoid the use of trusses and purlins. It is intended that the addition should be covered with asbestos tiles and ceiled with "Beaver-boards." It is desired that the main width of the ceiling (say, 26 ft.) should be 20 ft. above the floor level—the side portions being sloped down to the wall-heads, which will be 16 ft. above the floor. Perhaps a reader who has had experience of a similar case will kindly make a suggestion through the courtesy of your journal. L'EGLISE.

Weathering Properties of Stone.

SIR,—Can any of your stonemason readers inform me if from their experience a stone, which has been in the walls of a building for a period, say, 50 to 100 years, and gets weathered, is liable, when the building is dismantled, if redressed and re-used, to decay, crumble and deteriorate, or to "go to pieces." I have used in my time much of this re-used limestone and also sandstone redressed, and have not had any instance drawn to my attention where it has so deteriorated. One building had been up at least 250 years, and I re-used most of the stone removed again after redressing. And, I might say, that stone had the reputation of being in another building destroyed by Cromwell's soldiers before it was used in the building from which I removed it. I have been informed by a stonemason who claims to have had this experience that the stone will so deteriorate. Have any of your readers had similar experience? E.

ANSWERS.

Wall Tiling on Breeze Block.

[ANSWER TO "QUERY," NOVEMBER 24.]

SIR,—With reference to the question raised by your correspondents regarding the coming away of tiles from breeze slabs, there are three points which must be remembered if tiles are to remain in position :—

1. The breeze slabs should be made with quick-setting cement to which the Portland cement will adhere.

2. The breeze slabs should be thoroughly brushed with water, as dust clings to them. One cannot expect the cement to hold unless this is done.

3. As the breeze slabs are often made of waste ashes, there may be oil in them, or gas from the coal, which will often cause a blow. Most important of all, the wooden timber on which they are fixed will give with the settlement of the building, bringing the cement backing away. T. BUXTON.

19, Grove-road, N.15.

Contracts.

[ANSWERS TO "P.A.S.I.," NOVEMBER 24.]

SIR,—The fact that the bill of quantities is one of the contract documents does not in itself show that the quantities form part of the contract. The contract may still be a lump-sum contract, with the quantities attached as a schedule basis for variations. If this were the case, no party is at liberty to vary the lump sum, whether tendered in error or otherwise. If, however, the quantities form part of the contract, the surveyor's duty is to check and amend any errors in casting or extension, since it is the schedule rates which the contractor tenders. The form of contract differs in either case, and your correspondents will be able to see therefrom which form of contract is at issue.

SURVEYOR.

SIR,—In the circumstances the contractor is entitled to refuse to agree to any alteration of his lump-sum price as given in his tender. Neither the architect, surveyor or contractor are under any obligation to check the prices, etc., but it is obviously wise for them to do so before the contract is entered into.

The effect of an error in pricing bills of quantities applies to variations on the lump-sum contract in respect to the settlement of omissions and additions only (see Creswell on the 1931 Form of Building Contract, page 44). LEX.

Ancient Lights.

[ANSWER TO "X.," NOVEMBER 24.]

SIR,—Further information than that given is required to give advice upon the point in question. What is the height of the new building being erected, and to what use are the alleged ancient lights put? If there is considerable overshadowing of a valuable window, there would appear to be an infringement, on which your correspondent could claim for an injunction or damages. But if there is a reasonable angle of light to an unimportant window, such as to a larder, where ventilation is of more importance than light, his case would not be upheld. No party is entitled to the same quota of light in perpetuity to an ancient light, but only to such reasonable amount as may be required for ordinary normal user. LIGHT.

Question of Liability.

[ANSWER TO "PRACTICE," NOVEMBER 24.]

SIR,—It is a mistake to think that a contractor can go free of liability for a latent defect even if he can produce the completion certificate of the architects on its being discovered. As to the use of the habitation certificate of a local authority, it must be clearly understood that a local authority has no power to depart from or relax its by-laws in any instance. Nor is there any implication that on the grant of the habitation certificate "the by-laws have been satisfied." Reference should be made to the case of Newton Abbot Development Co., Ltd. *v.* Stockman Bros. (1931), 47 T.L.R. 616, which deals with this last matter. LEGAL.

Town Planning Scheme.

[ANSWER TO "R.," NOVEMBER 10.]

SIR,—The payment of compensation for land required for road improvements, or, more generally, for the coming into operation of any provision in a town-planning scheme or the execution of work under a scheme depends on the answer to the question: "Is the property injuriously affected?" If the answer is in the affirmative, the person suffering such injurious affection is entitled to recover compensation (Section 18 of T. and Cy. P.A., 1932), except for such provisions as come within the ambit of Section 19 of the same Act.

In the case under consideration, it would appear that about one-tenth of the area of the building plot is to be taken for street improvements, the road being already over by-law width; and as presumably this area has been included in the sale and paid for by the purchaser, it can hardly be maintained that there is no "injurious affection" to the property.

No claim could be made for compensation for the part of the strip of land required for improvements which forms part of the street end crossing to the side street, as this would be part of a street in any case, and in my opinion the claim should be limited to the cost of the remaining portion of the strip of land required to be added to the main road.

As a matter of practice it is desirable that, where possible, the local authority should make arrangements with the original landowner for the acquisition of lands required for such improvements on deposit of the estate plan, and that it should not be left to purchasers of single plots to deal with the local authority, which appears to be the case in this query. A.

THE WEEK IN PARLIAMENT

A Housing Review.

During the debate on the Address in reply to the King's Speech, the Opposition criticised the Government's housing policy, and, in particular, their plans for slum clearance, which it was alleged were inadequate.

SIR HILTON YOUNG, the Minister of Health, in reply, announced that the Government had agreed to allot £1,000,000 for the improvement of water supplies in rural areas during the next few years. As to housing, they were, at the present rate, overtaking the shortage far faster than they were before the subsidy was abolished. In the course of the last year since the abolition of the subsidy they had seen something in the nature of a housing boom. No fewer than 218,000 houses had been built to the end of September last, a larger number than was provided for in the original programme of Mr. Wheatley for 1933. Of these houses, 169,000 had been provided by private enterprise, and the year had broken all records for the construction of houses by private enterprise. That rate of building was being maintained. The Government were watching carefully, for the situation required ceaseless vigilance.

Since the abolition of the subsidy, unemployment in the building trade had decreased by 77,000. That was not enough, but it was a good sign, and a movement in the right direction. It had been said that the houses now being built were not small houses to let for the manual workers. Of the 218,000 houses, 86 per cent. were houses below £26 rateable value, and £35 in the Metropolitan area, and were houses for wage-earners, "black-coated" or manual workers. It must be remembered that the more houses built for the better class of wage-earner, the more was the pressure relieved on the lower type of accommodation to let. In order to provide the necessary information as to the small houses to let for manual workers he was having an examination made of the private enterprise houses built in the last twelve months. That examination was now in progress, and at present it covered 15 per cent., a pretty big sample. Judging by that sample, 38 per cent. of those private enterprise houses were below £13 (£20 in the Metropolitan area) rateable value. That meant they were the "C" class houses, in general, of a type that could be occupied by manual workers. But even more interesting still was the fact that 19 per cent. were houses to let, and not for sale. Those figures showed a substantial and unexpected increase in the amount of attention which was being paid by private enterprise to small houses to let for the wage-earner.

Areas of Houses.

MAJOR NATHAN asked the Minister of Health whether he could state the average superficial area of A type non-parlour houses, excluding small houses erected for aged persons under the Housing Act, 1930, and non-parlour flats, included in direct labour schemes and in contracts let by local authorities in England and Wales during each of the years 1929, 1930, 1931, 1932, and the period January to September, 1933, respectively.

MR. SHAKESPEARE, the Under Secretary, said that the average superficial areas for the periods in question were 766, 764, 758, 734 and 728 square feet respectively.

Greater London Housing.

MAJOR NATHAN asked the Minister of Health whether, in view of the shortage of working-class dwellings at cheap rents in the Greater London region, he would consider the issue of a special circular to the local authorities concerned encouraging them to promote, wherever necessary, the formation of public utility societies under Section 70 of the Housing Act, 1925.

MR. SHAKESPEARE said that the extension of the activities of public utility societies was one of the questions considered by the Moyne Committee, whose report was now receiving the Minister's consideration. He would bear the suggestion in mind.

THE BUILDING TRADE

ESSAYS ON BUILDING SUBJECTS—XXII.

By JOHN RAYWOOD

"SPOT" ESTIMATES.

WHERE quantities are supplied for the purpose of making up estimates for extensions to existing buildings, the quantity surveyor often finds it convenient to put in a number of "spot" items, the implication being that it is necessary to visit the building and value these items on the spot. Any piece of work that can be done can be measured at least provisionally; but it sometimes happens that an estimator can value certain works more accurately by looking at them as a whole than by endeavouring to affix suitable pricing to a large number of measured items. In such work the cost of labour is much higher in proportion to that of material than is generally the case with new work. In all such cases the estimator should take up the material and labour separately, and not endeavour to apply what might be described as routine pricing. It may serve to make this clearer if we take, for example, plastering to be made good round a new door opening broken through an old wall. Such an item, if measured, might read as, say:—Two yards super plastering to match existing to both sides of new door opening; followed by 32 ft. lin. join up edges of new and old work. The prices to be set against such items as these might vary widely in differing circumstances, so widely, in fact, that it would be quite unsafe to adopt any other method than that of estimating the number of hours that would be used up in carrying out the work and apportioning them in a more or less arbitrary manner. Yet on measured work there is a sound reason for giving a separate item for joining up new to old, for a patch 1 ft. wide by 9 ft. high would cost more than one 3 ft. by 3 ft. On the other hand, one 6 ft. by 6 ft. would certainly not (other things being equal) cost four times as much as one 3 ft. by 3 ft.

But in this article we do not propose to discuss pricing as applied to items in a properly drawn bill of quantities, but to give some hints that may be of some use to young estimators called upon to go out to a job, and more or less make up their estimates on the spot from a client's verbal instructions. To carry out such work an estimator is often expected to manage without an assistant, to say nothing of ladders and men to hoist them. Working for a builder in a small way of business, he may consider himself fortunate sometimes if an apprentice can be spared to hold one end of the tape for him on a job requiring a fairly accurate survey. Considerations of this sort have a bearing upon the estimator's equipment, which is one of the writer's reasons for recommending the old-fashioned bag in preference to the more modern case. A small hammer, a few nails, a coil of copper wire, a bradawl, some drawing pins, and other "gadgets" to be later mentioned, may be of great service, and they lie better in a bag than in a case. For the estimator, a cloth tape, 100 ft. long and in good condition, is better than a steel tape. His 5-ft. rods (6-ft. rods are sometimes preferred in the North) should be paired, and have a removable brass socket, so that they may be joined up to serve, when necessary, as a 10-ft rod. His 2-ft. four-fold rule should be of good quality, and have $\frac{1}{8}$ in., $\frac{1}{4}$ in., $\frac{3}{8}$ in. and $\frac{1}{2}$ in. scales on the bevelled inner edges, though some prefer to omit the $\frac{3}{8}$ in. and substitute inch. In addition to hard and soft blacklead pencils, it is useful to carry a red-lead pencil, for by means of rough sketches showing new work in red, matters may be made clear to a client more readily than by the use of technical terms. The dimension book should be wider than that usually carried, and have rate and money columns, so that estimates can, where necessary, be made up on the spot.

To make up an estimate at once is sometimes of great advantage, for should it not meet the client's approval modifications may often be made. When estimates are posted on, and are higher than expected, it is not unnatural that the client should call in a competitor. In regard to this, the builder would have no ground of complaint were it not that without any intention of acting unfairly, the customer often so modifies his requirements that the estimates are not comparable. It is, of course, impossible always to make up the estimate on the spot, but when it can be done the estimator will often come away with an order for the work. The estimate should be confirmed by written particulars posted the same day in order to avoid misunderstanding based on defective recollections on either side.

We do not wish to overload the estimator with paraphernalia, but there are a number of other things that may be carried with advantage on suitable occasions. For instance, the estimator may know that he is to give an estimate for repointing brickwork, repairing chimneys, or work of a similar nature at a height. On such occasions a pair of field glasses may prove very useful. Or again, some small extension or alteration may be much better handled if he takes with him a small drawing board, tee-square and set-square. A very handy board is one that will nicely accommodate foolscap typewriting paper, half-a-dozen clean sheets being pinned on before setting out. A refinement on this would be to have prepared sheets with a scale printed along one edge; but a paper scale, such as those supplied to students at technical schools, secured with drawing pins, answers very well.

Measuring Single Handed.

When the estimator is out by himself he often experiences some difficulty in getting accurate measurements with either tape or rod, particularly if the measurements to be taken are so numerous as to make him reluctant to ask assistance from anyone about the premises. Here it is that he will find a use for some of the articles already mentioned. Let us assume that for one purpose or another he has to measure up all the rooms in an empty building. Greater speed and accuracy is attainable with the tape than with the rods as a general rule, and the bradawl can be made to hold one end if entered into a floor or skirting board. If for some reason a measurement is to be taken higher up, drawing pins may hold the tape against plastered walls. Sometimes the tape may be made to serve as a datum line; for example, it may be desired to set up a rough elevation of a long wall in which there are a number of windows, and the following procedure may serve very well. At a convenient height, say, 4 ft. up, where a stretched tape will cross both doors and windows, pin up the tape. The first pin will be through the 1-ft. mark, and be entered into the plaster. Succeeding pins will enter architraves, and the last pin plastering, at a distance of 1 ft. from the wall, with sufficient slack let out to allow the tape-case to lie on the floor. It is then quite a simple matter to plot in the true position of everything crossed by the tape.

As another example we may take a case where it is proposed to build a small extension, and the client is anxious to see how much room is available, as, for instance, for turning a car. Here a few six-inch nails will serve as setting-out pegs, and the tape when run round them will serve to indicate the outside of the new walls. For very long lengths to which it may be necessary to apply the tape several times, as, for instance, for fencing or drains, three nails may be used after the manner of pins, and a very good line may be maintained if they are put in at fifty feet intervals when using a hundred-feet tape. If it is desired to leave behind some record of the line taken nails may be driven in up to the head, and if they pierce a bit of white cardboard they will, when in grass, be easier to find.

Calculated Measurements.

It is often inconvenient to take actual measurements, especially in respect to heights. By going to a window on the top floor and using both the tape and a five-foot rod, it may be easy to obtain a height to the eaves, but not so easy to obtain the height to the apex of a gable. If pitch and span are known there is no great difficulty in setting up to scale, and sometimes a sufficiently accurate calculation may be made by counting brick courses. A quick method of ascertaining the height to eaves is to count up the number of six-foot rainwater pipes, adding from judgment any shorter lengths. It often happens that windows in upper floors are of the same width as those below them, but of lesser height. The difference in the number of courses up the reveals will give the difference in height, and this may make for convenience, for it may make it unnecessary to visit bedrooms. When the estimate is for external works it is well to keep outside when possible. Counting courses and brick lengths gives a reasonably close computation of the area of pointing required in chimneys.

If the pitch of a roof covering be known and the area of the building can be obtained the area of slating, tiling or other covering can usually be calculated without laddering and measuring up the slopes. The pitches most commonly applied are 30 deg. for slates and 45 deg. for tiles, though other pitches are met with not infrequently. If the building be of brick and be gabled, the rise can be found by counting up the courses. But if it be hipped or the walls be covered with rough cast, other methods may have to be used. If a brick chimney projects through the roof covering the rise in a given length can be calculated by counting courses and brick lengths. Another method that gives reasonably close results is, at a point, say, 6 ft. from a corner and as high up as can be reached, to drive in a nail with a length of string attached; then, at a lower point and close to the corner, drive in another nail as a trial, and stretch the string over it; stand back and judge whether the string makes a line parallel with the roof covering, and, if not, make the necessary correction. Once the pitch is known the rest is simple, for if the same pitch is used throughout it does not matter how much the roof is broken up with hips, valleys, gables, hip-ends, and so on. That is to say, the area of roof covering on a hipped roof is exactly the same as on a gabled roof, provided the pitch is the same throughout. The science of roof measurement is ably dealt with in "Roof Tiling," by C. G. Dobson, and young estimators would find it well worth while to study the subject, for when either estimating or measuring up the work of sub-contractors, knowledge would save them much time and many calculations.

(To be continued.)

Slum Clearance.

The campaign against slums is to have a new headquarters for propaganda and information. The New Homes for Old Committee and the Under Forty Club are taking over from the Building Centre (Bond-street) the two model cottages on the Aldwych site adjoining Bush House, and will establish a housing centre there. In the upper rooms there will be a permanent exhibition—charts, models, photographs, statistics—illustrating slum conditions, town-planning work, and new building. There will also be an exact full-size replica of an overcrowded one-room dwelling in a London slum. Downstairs there is to be a library and reading-room and an information bureau, which will collate all the available data on slum clearance and housing problems. The remaining rooms will be the offices of the voluntary housing organisations taking part in the scheme. A large room in Bush House will be used for meetings and the showing of housing films.

PROGRESS OF BUILDING RESEARCH

Cause of Masonry Fall in King Henry VII's Chapel.

According to the Annual Report of the Building Research Board for 1932,* issued by the Department of Scientific and Industrial Research, measurements made by the Building Research Station to discover the cause of the fall of the heavy stone cusp from the roof of King Henry VII's Chapel in Westminster Abbey showed that vibration of the fabric of the building due to traffic was negligible. Microscopic examination of a fragment of the material taken from the vaulting from which the cusp fell revealed, however, that a fracture in the masonry had occurred at some previous time, and the suspension piece had been built up again in mortar without reinforcement. The fall of the cusp is attributed to the failure of this mortar. "Repairs of this type," the Report states, "are considered to be quite inadequate to carry the weight of the cusp with safety, and it is understood that the roof is now being examined to ascertain whether other cusps are in a similar dangerous condition."

Plasters.

"By far the largest number of failures which are reported to the Building Research Station," the Report states, "are concerned with plasters and renderings. The collapse of lime-plaster ceilings on lathing is such a common event that it seems not unreasonable to suggest, at least for important work, that some modification of the traditional methods is desirable." Hundreds of specimens of plaster have been submitted for examination, and in the majority of cases it could not be said that the materials were defective.

"It is probably safe to assume that haste is the most important of the changed conditions which give rise to these failures; undercoats are not allowed sufficient time to carbonate and dry thoroughly before applying finishing coats; manipulation is a more perfunctory matter than it was traditionally; fresh plaster is more liable to disturbance; poorly seasoned timber may warp and shrink; electricians, gas-fitters and pipe-fitters may be expected to work above them at a time when plaster ceilings are very sensitive to vibrations. As a result of these tendencies it is considered that the very low strength of a lime plaster ceiling on lathing should be augmented by an addition of a suitable material having definite hydraulic setting properties."

While Portland cement is often used for this purpose, there is danger of cracking through shrinkage, and it is suggested that the most satisfactory material is calcium sulphate. It is essential, however, that the plaster should be one for which setting-time is controlled. "There are suitable retarded plasters available," continues the Report, "but, in the absence of any formal specifications, recognition by the operative of the appropriate types cannot be relied upon. Considerable progress has been made, on the Committee of the British Standards Institution, towards the formulation of a standard specification for plasters which, when available, should eliminate some of the more serious difficulties."

Damp Walls.

Referring to the ever-present problem of damp walls, the Report states that in the case of a brick wall exposed to driving rain, moisture can most easily penetrate the wall, not through the material of the brick or the mortar, but by way of fine cracks formed between them. Waterproofing material, to be effective, must bridge such cracks and be sufficiently elastic to remain effective if the cracks widen. The failure of many colourless waterproofers is ascribed to the fact that they aim at reducing the permeability to moisture of the brick itself rather than at forming a continuous film. Three samples of proprietary coloured waterproofers were tested during the year. Two of these were pigmented bituminous emulsions, and one an imitation stone paint. With regard to this latter material, the Report says that it showed good resistance to weathering and was considered likely to remain effective and to retain a good appearance for a reasonably long period in comparison with other types of waterproofers tested.

* H.M. Stationery Office, 2s. 6d. net.

Keeping Out the Sun's Heat.

In view of the number of people who work in temporary buildings, it is not surprising that many inquiries received at the Building Research Station related to the type of thin roof best suited for excluding the heat of the sun. The results of a series of experiments on this subject are given in the Report. They show that the treatment of the under-surface of a thin metal roof is almost as important as that of the upper surface. The results bring out clearly the high efficacy of using a sheet having a highly reflective white upper surface and a non-radiating, bright lower surface. The Report states:—"In practice, probably the simplest way of obtaining an efficient roof with thin sheet materials is to use galvanised sheeting whitewashed on the upper surface. The metallic lower surface must, however, be kept clean. In a double roof a permanent metallic surface can be obtained conveniently by using metal-faced plywood for the lower sheet." When modifying an existing non-metallic or dirty roof, the recently introduced aluminium-faced wallpaper should be useful.

House Warming.

The Report also contains the results of some interesting experiments on the heating of a house. It has frequently been asserted, the Report states, by heating engineers of high repute that it is economical to heat buildings continuously, even when they are not used every day. Experiments to test the truth of this statement have been made in the experimental house at the Building Research Station. Throughout one winter the four rooms of the house were automatically kept at a suitable temperature day and night by electric convection heating. During the following winter the rooms were heated from 5.30 a.m. to 5.30 p.m., the amount of heat being adjusted so that the temperature used in the previous year's experiment was reached at 9.30 a.m. and maintained until 5.30 p.m. After making allowances for the variations of outside temperature, so as to make the two experiments comparable, the results showed that with this intermittent heating the house required three-quarters of the expenditure of energy required for continuous heating.

Brick "Cemetery."

With the object of testing the uniformity of bricks and the durability of various types for use below the dampcourse level, an exposure test of bricks on a comparatively large scale has been begun at the Building Research Station. Samples of about 500 bricks from a number of typical makes, including common and facing bricks, and covering a large range of clays, methods of preparation and firing, have been partially buried in the ground, forming a kind of cemetery, in such a way as to be subjected to the most severe conditions due to the action of both frost and soluble salts in the soil. A part only of each sample of bricks has been devoted to the "burial" test, and comparative data on laboratory freezing, crystallisation and other tests are also being obtained. It is hoped that the information provided by the exposure tests will form a valuable basis for the development of laboratory tests.

Proposed Swimming Pool, Blackpool.

A company, Lido Swimming Pool (Blackpool), Ltd., has been formed, with offices at 15, Upper Talbot-street, Blackpool, to construct an indoor swimming and aquatic sports stadium. The nominal capital is £30,000.

NEW BUILDINGS IN LONDON

BECKENHAM. — Rebuilding. — Messrs. Courage and Co., Ltd., Red Lion Brewery, Horselydown, S.E.1, propose to rebuild their "Coach and Horses" public-house. The brewery architect is Mr. F. M. Kirby, F.R.I.B.A.

BERMONDSEY. — Rebuilding. — The "Ship" public-house is to be rebuilt on a site at the corner of Rotherhithe-street and Silver-street, S.E. Plans have been prepared by the brewery architect to Messrs. Whitbread and Co., Ltd., Chiswell-street, E.C.1.

BETHNAL GREEN.—Rebuilding.—Messrs. George Keetch and Sons, Ltd., builders, St. Peter's Works, De Beauvoir-road, N.1, are rebuilding 392, Bethnal Green-road, E.

BOROUGH. — Rebuilding.—The Wenlock Brewery Co., Ltd., Wenlock-road, Islington, N., propose to put in hand the rebuilding of the "Hole in the Wall" public-house, Borough High-street. The plans have been prepared by Mr. W. G. Ingram, F.R.I.B.A., 4, Verulam-buildings, W.C.1. No contracts have been placed yet.

CHISWICK.—Additions.—The Brentford and Chiswick T.C. has accepted the estimate of Messrs. Greenaway and Son, 138, Lower Park-road, S.E.15, at £3,956, for additional dressing accommodation at the open-air swimming baths.

CROYDON.—Additions.—The C.B has approved plans for alterations and additions to the "Ship" public-house in High-street for Messrs. Whitbread and Co., Ltd., Chiswell-street, E.C.1.

CROYDON.—Alterations.—Messrs. Boots Cash Chemists, Ltd., Stanford-street, S.E.1, will make alterations and additions to their stores at 746, London-road. The company's architect is Mr. P. J. Bartlett, A.R.I.B.A., Station-street, Nottingham.

CROYDON.—Showrooms.—Work will be commenced soon on a new corner block of shops and showrooms in North End and Poplar-walk, for which plans have been prepared by Messrs. Hillier, Parker, May and Rowden, 27, Maddox-street, W.1.

CURZON-STREET.—Flats.—Messrs. Curzon Flats, Ltd., have placed a contract with Mr. H. J. Moyes, Ltd., 255, Clapham-road, S.W.9, for the demolition of the old Curzon Hotel and excavation of site prior to the building of a block of 122 flats. The architects are Messrs. Henry Tanner, 3, Hanover-square, W.1.

EALING.—Additions.—Mr. W. B. Binnie, 26, Old Queen-street, S.W.1, is the architect for additions to the Cleopatra works, Whitby-avenue, for the Indestructible Paint and Standard Varnish, Ltd.

EALING.—Factory.—A new factory, store and garages is to be erected in Cambridge-road for Mr. C. Kirby. The architect is Mr. R. A. C. Churchward, 12, Victoria-st., S.W.1.

EALING.—Schools.—Sketch plans to be prepared for enlargement of the North Ealing girls' and infants' school and for the Drayton boys' school. A new senior boys' school is to be erected at Horsenden. Plans are being prepared.

EDGWARE.—Shops.—A parade of shops and showrooms will be erected in Station-road for Mr. G. Cross. Part of the premises will be occupied by Messrs. F. W. Woolworth and Co., Ltd., 1, New Bond-street, W.1, as a branch stores. The contract has been placed with Mr. Henry Brown, Whippendell-road, Watford. The plans have been prepared by Messrs. Emden, Egan and Co., 7, Garrick-street, W.C.2.

EDGWARE-ROAD. — Showrooms. — Plans have been prepared by Messrs. O'Donoghue and Halfhide, F.&A.R.I.B.A., 5, Great Turnstile, W.C.2, for a block of motor showrooms and petrol service station. The contract has been placed with Messrs. F. and H. F. Higgs, Ltd., Station Works, Herne Hill, S.E.

ELTHAM.—Baths.—The Woolwich B.C. recommend, subject to the Works Committee agreeing to transfer the site and to the con-

sent of the Minister of Health being obtained, steps be taken to provide public baths for Eltham on the site adjoining Well Hall Pleasaunce.

ELTHAM.—Hotel.—Messrs. Halse and Sons, Ltd., 95-97, Shaftesbury-avenue, W.1, are erecting a new hotel called the "Royal Hotel," in Sidcup-road, for Messrs. Watney, Coombe, Reid and Co., Ltd., brewers.

FULHAM.—Additions.—Mr. A. E. Sewell, L.R.I.B.A., architect to Messrs. Truman, Hanbury, Buxton and Co., Brewery, Spitalfields, E.1, has prepared plans for alterations and additions to the "Atlas" public-house, 14 and 16, Seagrave-road, W. No building contracts have yet been placed.

FULHAM. — Extensions. — Messrs. Pickfords, Ltd., 205, High Holborn, W.C.1, are to erect a warehouse extension at 37a, Munster-road. The works architect is Mr. J. E. Beaumont.

GRAY'S INN.—Additions.—Messrs. C. W. Reeve, Son and Rason, 3, Gray's Inn-square, W.C.1, are the architects for additions to be erected to premises in Field-court, W.C.1. No contracts have yet been placed.

GREAT QUEEN-STREET. — Reconstruction.—Part of the Masonic Temple Scheme, work has now commenced on the demolition of property adjacent to the Connaught Rooms in order to effect their reconstruction and enlargement. The contract has been placed with Messrs. Walter Lawrence and Son, Ltd., 31, Sun-street, E.C.2. The plans have been prepared by Messrs. H. V. Ashley and Winton Newman, FF.R.I.B.A., 14, Gray's Inn-square.

GREENFORD. — Warehouse.—Messrs. Hal Williams and Co., 43, Bedford-square, W.C.1, are the architects for a gate house, sheds, store, gantry and warehouse at the Rockware Glass Works for the Rockware Glass Syndicate, Ltd.

GREENWICH.—Additions.—At the Miller General Hospital it is proposed to erect a new adult out-patients' department. Plans have been prepared by Messrs. William A. Pite, Son and Fairweather, 12, Carteret-street, S.W.1. No contracts have been placed.

GREENWICH. — Extensions.—The B.C. has acquired 71 and 73, London-street, as a site for extension to the municipal offices. Application has been successfully made to L.C.C. to borrow £3,500 for the work.

GREENWICH.—Theatre.—The B.C. are to receive tenders for the purchase, demolition and removal of the material contained in the Greenwich Theatre, London-street, Greenwich.

HANGER-LANE. — Factory. — Messrs. Percy Bilton, Ltd., 113, Park-street, W.1, are erecting a factory in Hanger-lane for Messrs. Arrow Electric Switches, Ltd.

HANWELL.—Additions.—The Trustees of the Queen Victoria and War Memorial Hospital are to have additions made to the hospital. The architects are Messrs. Dodge and Reid, 120, High-street, Brentford.

HAVERSTOCK HILL.—Flats.—The estate, known as Hillside, Haverstock Hill, N.W., is to be developed by the erection of about 150 flats, 10 shops, hall, etc. Contracts have not yet been arranged. The architects are Messrs. T. P. Bennett and Son, F.R.I.B.A., 41, Bedford-row, W.C.1.

HAYES COMMON. — Rebuilding. — The tender of Messrs. C. H. Gibson, Ltd., 509, London-road, Croydon, has been accepted for the rebuilding of the "New Inn" public-house. The owners are Messrs. John Davenport and Sons, Ltd., Bath-row, Birmingham, whose architects are Messrs. Batemans, F.R.I.B.A., 18, Bennett-hill, Birmingham.

HIGH HOLBORN.—Premises.—The London Passenger Transport Board, 55, Broadway, S.W.1, are to have new premises erected on the remaining portion of the site in High Holborn, New Turnstile and Gate-street, W.C.2. The building work has been placed with Messrs. James Carmichael (Contractors), Ltd., 331, Trinity-road, Wandsworth, S.W.

HORNCHURCH.—Houses.—The Building Committee of the Council reported that they had considered the plans deposited by Messrs. Costain for the development of part of Elm Farm, and had approved them. They included a plan for 444 houses on the eastern and western sections of the Elm Farm estate.

ISLEWORTH.—Modernisation.—The Middlesex C.C. are to spend £3,000 for renovations and modernisation of wards D.1, D.2, and D.3, at the West Middlesex County Hospital. The Public Health Committee also recommend a new casual ward on the site of Dundee House. Mr. W. T. Curtis, F.R.I.B.A., 10, Great George-street, S.W.1, is the County Architect.

KENSINGTON. — Pavilion. — H.M.O.W. have placed a contract with Messrs. Galbraith Bros., Ltd., 71, Waterloo-street, Camberwell, S.E.5, for the erection of a refreshment pavilion in Kensington-gardens.

KENTISH TOWN-ROAD.—Rebuilding.—An expenditure of about £5,000 is to be made on the rebuilding of the "Devonshire Arms" public-house, 39, Kentish Town-road, E. The plans have been prepared by Mr. F. M. Kirby, F.R.I.B.A., architect to the owners, Messrs. Courage and Co., Ltd., Horsleydown, S.E.1, brewers.

KINGSTON. — Municipal Offices. — The T.C. has accepted the estimate of Messrs. F. and H. F. Higgs, Ltd., Station-works, Hinton-road, S.E.24, for the demolition of the municipal offices and courts at £648, and for excavations and foundations for the new buildings at £4,868. Mr. Maurice E. Webb, F.R.I.B.A., 19, Queen Anne's-gate, S.W.1, is the architect, and the quantity surveyors are Messrs. George Corderoy and Co., 21, Queen Anne's-gate, S.W.1. The completed scheme is estimated to cost £124,700.

MERTON.—Hall.—The Wimbledon Methodists are to proceed with the erection of a school hall and adjacent class rooms on the site they have acquired near South Merton Station. The architect, Mr. Frederic Lawrence, F.I.A.A., 217, Seabourne-road, Pokesdown, Bournemouth, has prepared plans for a building that will give accommodation to 250 adults or 400-500 Sunday scholars.

PARK-LANE.—Flats.—A site in South-street, W.1, has been acquired by the Western Heritable Investment Co., Ltd., Glasgow, for about 90 service flats, residential club, swimming bath, etc. The company will carry out the building works to the designs of their architect, Mr. J. Wilson, A.R.I.B.A., 141, Bath-street, Glasgow.

PERIVALE.—Hall.—A new parish hall to cost £1,500 is being planned for Perivale. It will be built in the rectory grounds. The new hall, plans for which have been drawn up by Mr. John P. Blake, architect, Bank House, High-street, Hounslow, will accommodate 250 persons.

PERIVALE.—Hospital.—The Ealing T.C. recommend a new maternity hospital at Perivale to cost about £35,000.

POPLAR. — Additions. — The B.C. has approved plans for additions to Woodland-works, Wick-lane, E.3, by Messrs. Lupton and Sons, builders, 32, George-street, N.W.1.

SHEPHERD'S BUSH. — Exchange. — The Ministry of Labour are proposing to erect on a site in Westville-road, W.12, a labour exchange.

SHOREDITCH.—Factory.—A site at 2-6, Curtain-road, and 1-3, Hearn-street, E.1, is being cleared preparatory to the building of a factory. No contracts have been placed yet, but plans are being prepared by Messrs. Wheat and Luker, 19, Basinghall-street, E.C.

SOUTHWARK. — Hall.—A site adjoining St. George's Cathedral has been acquired for a new parish hall, etc. The plans have been prepared by Messrs. F. A. Walters and Son, F.R.I.B.A., 28, Great Ormond-street, W.C.1. No contracts have been placed yet.

STEPNEY.—Dwelling.—Mr. Bernard J. Belsher, F.R.I.B.A., Borough Engineer and Surveyor, is the architect for nine dwellings to be erected at 23-27, Old Gravel-lane by Messrs. Gee, Walker and Slater, Ltd., 32, St. James's-street, S.W.1, for the Stepney B.C. The accepted tender price is £5,140.

STANMORE. — Extensions.—Including a new convalescent ward, etc., are projected at the Royal National Orthopædic Hospital. The plans have been prepared, the architects being Messrs. Murrell and Pigott, FF.R.I.B.A., 44, Bedford-row, W.C.1.

TOOTING.—Shops.—A contract has been placed with Messrs. J. Kidd and Son, 89, Crescent-lane, S.W.4, for a block of shops and showrooms at Tooting Broadway, S.W. The architects are Messrs. H. Wakeford and Son, 184, Clapham-road, S.W.9.

TOTTENHAM.—Pool.—The U.D.C. has approved plans for an open-air pool at Lordship-lane, at an approximate cost of £28,000. The scheme includes provision for sun-bathing facilities, children's paddling pool, restaurant and car park.

WIMBLEDON.—Residence.—The contract for a residence in Princes-road, S.W., has been placed with Messrs. Ekins and Co., Ltd., Great Northern Works, Hertford. The plans have been prepared by Sir Edwin Lutyens, R.A., 13, Mansfield-street, W.1.

WOOLWICH.—Workshops.—The B.C. are to make application to the L.C.C. for sanction to borrow £5,000 for the erection of permanent workshops at the Page and Middle Park housing estates. The site is adjoining the Estate Office in Westborne-avenue, Eltham. Plans are by the Borough Engineer.

YIEWSLEY.—School.—The Yiewsley-West Drayton U.D.C. has received intimation from the Middlesex E.C. that preliminary plans for a senior school for about 700 children on the Falling-lane site have been prepared and submitted to the B. of E. Mr. W. T. Curtis, F.R.I.B.A., 10, Great George-street, S.W.1, is the County Architect.

NEW CINEMAS

CHEAM.—Schools.—The Surrey E.C. have acquired sites at Cheam-common and Park Farm estate for two schools, each accommodating 384 children. The plans are being prepared by Messrs. Jarvis and Richards, A.&F.R.I.B.A., 8a, Lower Grosvenor-place, S.W.1. No tenders have been invited yet.

EALING. — Alterations. — Nos. 1-8, The Broadway, is to be altered for Messrs. Sayers and Son, Ltd., from plans prepared by Mr. A. H. Jones, architect, Victoria Station House, S.W.1.

FALKIRK.—Plans have been prepared for the demolition of the Grand Theatre and erection of a cinema by Mr. Charles McNair, architect, 112, Bath-street, Blythswood, Glasgow. A contract for the excavation, brick and mason works has been placed with Messrs. Andrew Mitchell and Sons, Ltd., Clarkston-road, Cathcart, Glasgow. The steelwork will be by Messrs. Redpath, Brown and Co., Ltd., Wellington-street, Glasgow. Messrs. Gladstone Browne & Co., 102, Bath-street, Glasgow, are the quantity surveyors.

GILLINGHAM (DORSET).—Mr. R. W. M. Robinson, the Palace Cinema, Blandford, Dorset, proposes a new cinema at High-street, Gillingham. Plans have been approved.

LEEDS.—Messrs. M. J. Gleeson, Ltd., of Sheffield, are to commence work almost immediately on the erection of the new cinema at the junction of Vicar-lane and Hodnet-street, Leeds, for Associated British Cinemas, Ltd. The architect to the company is Mr. W. Glen, 30, Golden-square, London, W.1.

LIVERPOOL.—Mr. A. Ernest Shennan, F.R.I.B.A., 14, North John-street, Liverpool, is to prepare plans for the reconstruction of the Pavilion, Liverpool.

NEWCASTLE-ON-TYNE. — The contract for the conversion of the old St. Paul's Church, Westgate-road, into a cinema has been let to Messrs. Henderson Bros., Smith-street, Tyne Dock, South Shields. Architect, Mr. E. Lawson, 19, Ridley-place, Newcastle.

SHAFTESBURY-AVENUE. — British News Theatres, Coleman-street, E.C.2, are considering the conversion of property known as the "Eros" Café, at the Monico Corner of Shaftesbury-avenue, into a news theatre. The company's architect is Mr. Alister G. MacDonald, A.R.I.B.A., 13, Queen Anne's-gate.

WIGTOWN, N.B.—A cinema, to plans by Mr. Alex. Young, L.R.I.B.A., 64, Victoria-street, Newton-Stewart, is proposed in North Main-street, for Mr. John Lawrence.

WOODFORD, ESSEX.—Messrs. Howis and Belcham, 9, Fenchurch-street, E.C.3, have been appointed architects for a cinema proposed on a central site. The promoters are Messrs. C. and A. D. March, "St. Margarets," Loughton.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st OCTOBER, 1933.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Crafts-men.	Lab-ourers.
Aberdare	1/5	1/0½
Abergavenny	1/5	1/0½
Aberystwyth	1/2	10½
Accrington	1/5½	1/1½
Aldeburgh	1/1½	10½
Aldershot	1/2	10½
Alfreton	1/5½	1/1½
Alnwick	1/4½	1/0½
Altrincham	1/5½	1/1½
Amble	1/4½	1/0½
Amersham	1/3½	11½
Ammanford	1/5½	1/1½
Andover	1/2	10½
Arundel	1/2½	11
Ascot	1/3½	11½
Ashby-de-la-Zouch	1/4	1/-
Ashford (Kent)	1/2	10½
Ashford (Middx.)	1/4	1/-
Ashington	1/4½	1/0½
Ashtead	1/4	1/-
Ashton-under-Lyne	1/5½	1/1½
Aylesbury	1/2½	11
Aylsham	1/2	10½
Bagshot	1/2	10½
Banbury	1/3	11½
Barnsley	1/5½	1/1½
Barnstaple	1/3½	11½
Barrow-in-Furness	1/5½	1/1½
Barry	1/5½	1/1½
Basingstoke	1/3	11½
Bath	1/4	1/-
Batley	1/5½	1/1½
Beaconsfield	1/3½	11½
Beccles	1/2	10½
Bedford	1/4	1/-
Berkhamsted	1/2	10½
Berwick	1/4½	1/0½
Beverley	1/5½	1/1½
Bexhill	1/3	11½
Bideford	1/3½	11½
Biggleswade	1/3	11½
Billericay	1/2	10½
Birchington	1/3	11½
Birkenhead	1/7‡	1/2½
Birmingham	1/5½	1/1½
Bishop Auckland	1/5	1/0½
Bishops Stortford	1/3	11½
Blackburn	1/5½	1/1½
Blackpool	1/5½	1/1½
Blindley Heath	1/3	11½
Blyth	1/5½	1/1½
Bognor Regis	1/2½	11
Bolton	1/5½	1/1½
Bournemouth	1/4	1/-
Bracknell	1/3	11½
Bradford	1/5½	1/1½
Bradford-on-Avon	1/2*	10½
Braintree	1/3½	11½
Brentwood	1/5	1/0½
Bridgwater	1/3	11½
Bridlington	1/5	1/0½
Brighouse	1/5½	1/1½
Brighton	1/4	1/-
Bristol	1/5½	1/1½
Broadstairs	1/3	11½
Bromsgrove	1/4½	1/0½
Bromyard	1/1½	10½
Buckley	1/5½	1/1½
Bungay	1/1	9½
Burnham-on-Crouch	1/2	10½
Burnley	1/5½	1/1½
Burslem	1/5½	1/1½
Burton-on-Trent	1/5½	1/1½
Bury	1/5½	1/1½
Bury St. Edmunds	1/2½	11
Buxton	1/5	1/0½
Byfleet	1/3	11½
Cambridge	1/4½	1/0½
Canterbury	1/2½	11
Cardiff	1/5½	1/1½
Carlisle	1/5½	1/1½
Carnforth	1/5½	1/1½
Castleford	1/5½	1/1½
Caterham	1/4	1/-
Chard	1/1½*	10½
Chatham	1/3½	11½
Chelmsford	1/3½	11½
Cheltenham	1/4	1/-
Chepstow	1/4½	1/0½
Chertsey	1/4	1/-
Chester	1/5½	1/1½
Chesterfield	1/5½	1/1½
Chichester	1/2½	11
Chorley	1/5½	1/1½
Cirencester	1/2½*	11
Clacton	1/3½	11½
Cleveleys	1/5½	1/1½
Clitheroe	1/5½	1/1½
Cobham	1/4	1/-
Colchester	1/4	1/-
Colwyn Bay	1/4½	1/0½
Congleton	1/5	1/0½
Coventry	1/5½	1/1½
Cranbrook	1/1	9½
Cranleigh	1/2½	11
Crawley	1/3	11½
Crewe	1/4½	1/0½
Cromer	1/2	10½
Crowborough	1/3	11½
Cuckfield	1/3	11½
Darlington	1/5½	1/1½
Darwen	1/5½	1/1½
Daventry	1/3½	11½
Deal	1/2½	11
Denbigh	1/4	1/-
Derby	1/5½	1/1½
Devizes	1/2*	10½
Dewsbury	1/5½	1/1½
Didcot	1/3½	11½
Diss	1/2	10½
Doncaster	1/5½	1/1½
Dorchester	1/2½*	11
Dorking	1/3	11½
Dover	1/2½	11
Dovercourt	1/3½	11½
Driffield	1/4	1/-
Droitwich	1/4½	1/0½
Dudley	1/5½	1/1½
Dunstable	1/2	10½
Durham	1/5½	1/1½
Eastbourne	1/4	1/-
E. Glam. (Mon. Val.)	1/5	1/0½
East Grinstead	1/3	11½
Edenbridge	1/3	11½
Ely	1/2	10½
Epping	1/4	1/-
Exeter	1/4½*	1/0½
Exmouth	1/3	11½
Fakenham	1/2	10½
Falmouth	1/3½	11½
Fareham	1/3	11½
Faversham	1/2	10½
Felixstowe	1/4	1/-
Filey	1/4	1/-
Fleetwood	1/5½	1/1½
Flint	1/5½	1/1½
Folkestone	1/2½	11
Frinton-on-Sea	1/3½	11½
Frome	1/2½*	11
Gainsborough	1/4	1/-
Gateshead	1/5½	1/1½
Gillingham	1/3½	11½
Glossop	1/5½	1/1½
Gloucester	1/4½*	1/0½
Godalming	1/3	11½
Goole	1/4½	1/0½
Gosport	1/4	1/-
Grantham	1/4	1/-
Gravesend	1/5	1/0½
Gt. Yarmouth	1/3	11½
Grimsby	1/5½	1/1½
Guildford	1/3	11½
Guilsborough	1/3½	11½
Halifax	1/5½	1/1½
Hanley	1/5½	1/1½
Harpenden	1/3	11½
Harrogate	1/5½	1/1½
Hartlepools	1/5½	1/1½
Harwich	1/3½	11½
Haslemere	1/2½	11
Hastings	1/2½	11
Hatfield	1/4	1/-
Haywards Heath	1/3	11½
Hednesford	1/4½	1/0½
Hemel Hempstead	1/4	1/-
Henley	1/3½	11½
Hereford	1/3½*	11½
Herne Bay	1/2	10½
Hertford	1/4	1/-
Heysham	1/5½	1/1½
Hitchin	1/3½	11½
Hoddesdon	1/4	1/-
Holt	1/1	9½
Horley	1/3	11½
Horsham	1/2½	11
Horwich	1/5½	1/1½
Huddersfield	1/5½	1/1½
Hull	1/5½	1/1½
Hunstanton	1/2	10½
Huntington	1/2½	11
Ilfracombe	1/2½	11
Ingatestone	1/3	11½
Ipswich	1/4	1/-
Isle of Thanet	1/3	11½
Isle of Wight	1/2	10½
Keighley	1/5½	1/1½
Kenilworth	1/5½	1/1½
Kettering	1/4½	1/0½
Kidderminster	1/4½	1/0½
King's Lynn	1/2½	11
Kirkham	1/5½	1/1½
Knowle	1/4½	1/0½
Lancaster	1/5½	1/1½
Leamington	1/5	1/0½
Leatherhead	1/4	1/-
Leeds	1/5½	1/1½
Leicester	1/5½	1/1½
Leighton Buzzard	1/2	10½
Letchworth	1/3½	11½
Lewes	1/2	10½
Lichfield	1/4½	1/0½
Lincoln	1/5½	1/1½
Littlehampton	1/2½	11
Liverpool	1/7‡	1/2½
Llandudno	1/4½	1/0½
Llanelly	1/5½	1/1½
London—		
12 m. radius	1/7*	1/2½
12-15 m. radius	1/6½*	1/2
Long Eaton	1/5½	1/1½
Longton	1/5½	1/1½
Loughborough	1/5½	1/1½
Louth	1/4	1/-
Lowestoft	1/3	11½
Luton	1/4	1/-
Macclesfield	1/5	1/0½
Maidenhead	1/4	1/-
Maidstone	1/3½	11½
Malvern	1/4	1/-
Manchester	1/5½	1/1½
Manningtree	1/2	10½
Mansfield	1/5½	1/1½
March	1/2	10½
Margate	1/3	11½
Market Harborough	1/4	1/-
Matlock	1/4	1/-
Melton Constable	1/1	9½
Melton Mowbray	1/4½	1/0½
Merthyr Tydfil	1/5	1/0½
Middlesbrough	1/5½	1/1½
Middleton	1/5½	1/1½
Middlewich	1/4½	1/0½
Milford Haven	1/3½	11½
Morecambe	1/5½	1/1½
Morley	1/5½	1/1½
Mundesley	1/2	10½
Nantwich	1/4½	1/0½
Newark	1/4½	1/0½
Newbury	1/2½	11
Newcastle-on-Tyne	1/5½	1/1½
Newcastle-u.-Lyme	1/5½	1/1½
New Forest	1/2½	11
Newmarket	1/3	11½
Newport, Mon.	1/5½	1/1½
Newport Pagnell	1/2	10½
Northampton	1/5	1/0½
Norwich	1/4½	1/0½
Nottingham	1/5½	1/1½
Nuneaton	1/5½	1/1½
Oakham	1/4	1/-
Oldham	1/5½	1/1½
Ormskirk	1/5½	1/1½
Oxford	1/4½	1/0½
Oxted	1/2½	11
Paignton	1/4½	1/0½
Peterborough	1/4½	1/0½
Plymouth	1/5½*	1/1½
Pontypridd	1/5	1/0½
Portsmouth	1/4	1/-
Port Talbot	1/5½	1/1½
Preston	1/5½	1/1½
Pulborough	1/2	10½
Ramsgate	1/3	11½
Reading	1/4½	1/0½
Redcar	1/5½	1/1½
Redditch	1/4½	1/0½
Redhill	1/3½	11½
Reigate	1/3½	11½
Retford	1/4	1/-
Ripon	1/4	1/-
Rochdale	1/5½	1/1½
Rochester	1/3½	11½
Rugby	1/5½	1/1½
Saffron Walden	1/2	10½
St. Albans	1/4½	1/0½
St. Helens	1/5½	1/1½
St. Neots	1/2½	11
Salisbury	1/2*	10½
Salisbury Plain	1/2½*	11
Sawbridgeworth	1/3½	11½
Saxmundham	1/1½	10½
Scarborough	1/5	1/0½
Selby	1/5½	1/1½
Sevenoaks	1/3½	11½
Sheerness	1/2½	11
Sheffield	1/5½	1/1½
Shipley	1/5½	1/1½
Shoeburyness	1/4½	1/0½
Shrewsbury	1/4½	1/0½
Sittingbourne	1/2	10½
Skegness	1/4	1/-
Sleaford	1/4	1/-
Slough	1/4	1/-
Southampton	1/4½	1/0½
Southend-on-Sea	1/4½	1/0½
Southport	1/5½	1/1½
South Shields	1/5½	1/1½
Spalding	1/3	11½
Stafford	1/4½	1/0½
Staines	1/4	1/-
Stamford	1/4	1/-
Stevenage	1/3½	11½
Stockport	1/5½	1/1½
Stockton-on-Tees	1/5½	1/1½
Stoke-on-Trent	1/5½	1/1½
Stourbridge	1/5	1/0½
Stourport	1/4½	1/0½
Stowmarket	1/2	10½
Stratford-on-Avon	1/4	1/-
Stroud	1/3½†	11½
Sunderland	1/5½	1/1½
Sutton Coldfield	1/5½	1/1½
Swaffham	1/1	9½
Swanage	1/3½*	11½
Swansea	1/5½	1/1½
Swindon	1/4*	1/-
Tamworth	1/5	1/0½
Taunton	1/3½	11½
Tenterden	1/2	10½
Tewkesbury	1/4*	1/-
Thetford	1/2	10½
Thorpe Bay	1/4½	1/0½
Todmorden	1/5½	1/1½
Tonbridge	1/3½	11½
Torquay	1/5	1/0½
Totnes	1/3½†	11½
Trowbridge	1/2½*	11
Truro	1/1½	10½
Tunbridge Wells	1/3½	11½
Uppingham	1/4	1/-
Uttoxeter	1/3½	11½
Wakefield	1/5½	1/1½
Walsall	1/5½	1/1½
Walsden	1/5½	1/1½
Walton-on-Naze	1/3½	11½
Ware	1/4	1/-
Warminster	1/2*	10½
Warrington	1/5½	1/1½
Warwick	1/5	1/0½
Wellingborough	1/4½	1/0½
Wells (Norfolk)	1/1	9½
Welwyn	1/3	11½
Welwyn Gar. City	1/4½	1/0½
West Bromwich	1/5½	1/1½
Westcliff-on-Sea	1/4½	1/0½
Weston-super-Mare	1/4½	1/0½
Weybridge	1/4	1/-
Weymouth	1/3*	11½
Whitby	1/4½	1/0½
Whitstable	1/2	10½
Widnes	1/5½	1/1½
Wigan	1/5½	1/1½
Wigton	1/4	1/-
Willington	1/5	1/0½
Wilmslow	1/5½	1/1½
Winchester	1/3	11½
Windermere	1/3½	11½
Windsor	1/4	1/-
Wisbech	1/2	10½
Witham	1/2½	11
Woking	1/3½	11½
Wokingham	1/3½	11½
Wolverhampton	1/5½	1/1½
Woodbridge	1/2	10½
Worcester	1/4½	1/0½
Workington	1/4	1/-
Worksop	1/4	1/-
Worthing	1/2½	11
Wrexham	1/5	1/0½
Wroxham	1/2½	11
Wycombe	1/4	1/-
Wymondham	1/1½	10½
Yeovil	1/3*	11½
York	1/5½	1/1½

* Painters, 1d. less than other Craftsmen.

† Painters, ½d. less than other Craftsmen.

‡ Plasterers, 1s. 8d.

For Building Trade Wages in Scotland, see page 888.

CONTRACTS OPEN

For some contracts still open, but not included in this List, see previous issue. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

DECEMBER 4.

Chiswick.—Shelter.—And attendant's office at Chiswick (new) burial ground, Staveley-rd., for Brentford and Chiswick T.C. L. A. Cooper, B.E. and S. Dep. £2 2s.

Coleraine.—Installation.—Low-pressure hot-water heating and central hot-water supply system and accessories in Society's schools, for Irish Society. T. H. M'Murray, consulting engineer, 26, Cliftonville-av., Belfast.

Colwyn Bay.—Wiring.—At Plas Tirion Clinic, Nantyglyn-rd., for U.D.C. W. J. Dunning, E. and S.

Fraserburgh.—Annexe.—At Academy, for Aberdeen C.C. G. M. Hay, F.R.I.B.A., 177, Union-st., Aberdeen.

Haywards Heath. — Heating. — Installation at "Oaklands," Haywards Heath, for U.D.C. G. Plummer, S.

Huddersfield.—Painting.—At Berry Brow and Goitfield Council schools and at Spark Hall Council school, for C.B. B.E., 1, Peel-st.

Kirkby Stephen.—Instruction Room.—Semi-permanent and play sheds and alterations to out-offices at Central School, for Westmorland E.C. A. Knewstubb, P.A.S.I., architect, St. Andrew's-chams., Penrith.

Kirkintilloch.—Exchange.—Employment exchange, for H.M.O.W. Architect, 122, George-st., Edinburgh.

Lochgelly.—Painting.—And installation of electric lighting at the proposed retiring rooms, etc., and tennis pavilion at Bowhill, Cardenden, for T.C. Wm. Williamson & Hubbard. F. & A.R.I.B.A., Royal Bank-buildings, Kirkcaldy.

Manchester. — Erection. — Of Eastern District sorting office, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Rotherham.—Houses.—134, for R.D.C. A. E. Lant, E. Dep. £2 2s

Rotherham.—Electrical Wiring.—Of 134 non-parlour 3 bedroom type houses, for R.D.C. A. E. Lant, E.

Stanhope.—Alterations.—At Workmen's Club, Stanhope, Co. Durham.

West Cornforth.—Installation.—Electric light installation at Ferryhill branch, for Industrial Co-operative Society, Ltd., Registered Office, High-st.

Woodford.—Fencing.—Unclimbable iron fencing for recreation ground, for U.D.C. A. D. Ward, A.M.I.C.E.

DECEMBER 5.

Aldershot.—Alteration.—And renewal of sanitary fittings in existing conveniences, at infants' school, Queen's-rd., for T.C. B.S. Dep. £1 1s.

Ballyshannon.—Houses.—80, and roadway and baths on Flower estate, No. 1, for Town Commissioners. McDonnell, Dixon & Downes, architects, 20, Ely-place, Dublin. Dep. £5 5s.

Carnarossa, Co. Meath.—School.—For Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1.

Cherry Hinton.—Erection.—Of telephone exchange, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

Chippenham.—Cottages.—22, in Wood-lane, for T.C. B.S. Dep. £2 2s.

Dublin.—Cottages.—294, on various sites, for Dublin Board of Public Health. T. B. Byrne, Engineer to Board, 15, Parnell-sq., Dublin.

Dunfermline.—Houses.—52, at Townhill, for T.C. D. H. Shaw, E. Dep. £1 1s.

Earsdon.—Houses.—52, at Holywell, for U.D.C. T. W. Burgess, S. Dep. £1.

Egham.—Conveniences.—Conversion of an existing building at Cemetery, St. Jude's-rd., Englefield-green, for U.D.C. E. and S.

Hinckley.—Houses.—60, Middlefield-lane estate, for U.D.C. J. S. Featherstone, E. and S. Dep. £2 2s.

Leee.—Bungalow.—At Plaidy Park, for Miss M. K Gaved. H. R. Venning, L.R.I.B.A., Midland Bank-chame., Liskeard.

Moray.—Cottages.—2, at Hopeman and 2 at Garmouth, for C.C. J. & W. Wittet, F.L.R.I.B.A., Elgin.

Newton Abbot.—Wiring, etc.—To 4 houses in Bishopsteignton and 15 in Ipplepon, for R.D.C. J. S. Perry, 44, Prospect-terr.

Pendower, near Veryan.—Addition.—To "Nare Hotel." A. J. Cornelius, architect, Truro.

Workingham.—Supply.—And erection of filter plant, heating and ventilating plant, and laundry plant for proposed public baths, for Corporation. Town Clerk, Town Hall, Workington.

DECEMBER 6.

Buncrana.—Houses.—30, at St. Mary's-rd., Site No. 1, and 34, at Castle Field, Cock-hill-rd., No. 2 Site, at Buncrana, for U.D.C. J. P. M'Grath, architect, 1, Newmarket-st., Derry.

Carmarthen.—Alterations.—To 18, Notts-sq., for W. H. Parry-Jones, The Pharmacy, St. Cleare. A. L. Crabb, L.R.I.B.A.

Durham. — Alterations. — And extensions to vagrants' building at Poor Law Institution, for C.C. W. J. Merrett, C.E. and S., 20, Old Elvet, Durham.

Hull.—Heating.—Low pressure hot water installation and domestic hot water supply apparatus for proposed senior dept., Maybury-rd. school, for T.C. D. Harvey, City Architect, Dep. £1 1s.

Hull.—Installation.—Of electricity at Maybury-rd. school (senior dept.), for T.C. D. Harvey, City Architect. Dep. £1 1s.

Stratford-on-Avon.—Sheds, etc.—10 wooden sheds on concrete floors on housing sites in Wellesbourne and Welford districts, for R.D.C. H. J. Weeks, S., 11, Guild-st.

Wembley.—Heating.—Open-air swimming bath, for U.D.C. C. R. W. Chapman, E. and S.

DECEMBER 7.

***Andover.**—Offices.—Erection of Council Offices in the Junction-rd., for R.D.C. F. Henshaw, L.R.I.B.A., Westminster Bank-chams. Dep. £1 1s.

Cheadle.—Houses.—12 non-parlour type, for R.D.C. A. P. Hancock, S. Dep. £2 2s.

Devizes.—Houses.—26 non-parlour, Jump farm site, for T.C. A. W. Jakeway, B.S. Dep. £2 2s.

Glasgow. — School. — And child welfare centre, Garngadhill, for T.C. D. Stenhouse, T.C. Dep. £2 2s.

Hoole.—Houses.—60, in Hoole-lane, including roadway, sewers, footpaths and fencing, for U.D.C. E. H. Rigby, clerk. Dep. £2 2s.

DECEMBER 8.

Aberdare,—Houses.—50, at Trecynon, for U.D.C. S. Dep. £2 2s.

Birmingham.—Painting.—At Highbury Home, King's Heath, for T.C. Public Assistance Officer.

***Canvey Island.**—New Council Office.—For U.D.C. P. G. W. Stokes, A.M.Inst.C.E., engineer and surveyor, Long-rd. Dep. £2 2s.

Manchester.—Cleansing Station.—At Monsall Hospital for T.C. City Architect. Dep. £1 1s.

Middlesbrough.—Isolation Block.—At West Lane Hospital, for Corporation. S. E. Burgess, B.E. and S.

Rugby.—Heating.—And hot water service apparatus at post office radio station, Hillmorton, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

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DOOR
GEAR
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OR WEIGHT ON FLOOR.
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PRIVATE BRANCH EXCHANGE

DECEMBER 9.

Bala.—Conveniences.—For U.D.C. T. Watkins, architect, 5, Plasey-st.

Batley.—Housing.—30 houses and 10 bungalows on Purlwell-lane estate, for T.C. B.E.

Douglas.—Wiring.—Of 28 flats in Lord-st., for T.C. B. Kelly, Borough Electrical Engineer, Ridgeway-st.

Erith.—Repairs.—And redecorations to two chapels in cemetery, for U.D.C. H. Hind, E. and S. Dep. £1 1s.

Gravesend.—Redecorations.—And internal repairs at St. James's C.E. School, for T.C. J. G. Bennett, Borough Architect.

***Gravesend.**—Conveniences.—New blocks of conveniences at Church-st. Council school, for E.C. J. G. Bennett, 5, Woodville-ter. Dep. £1 1s.

Salford.—Substation.—In Heys-rd., Prestwich, for T.C City Electrical E.

***Wood Green.**—Construction of an open-air swimming pool, etc., at Durnsord-rd., for B.C. Mr. R. H. Matthews, A.M.Inst.C.E., Town Hall Dep. £4 4s.

DECEMBER 11.

Bangor.—Building.—Domestic science building in grounds of Normal College, junction of Menai and Meirion-rds., for North Wales Counties Training College Committee. T. E. Jones & I. ap. Thomas, A.A.R.I.B.A., Midland Bank-chams., Bangor.

Blandford.—Repairs.—To municipal buildings, for T.C. W. H. Wilson, T.C. Dep. £2 2s.

Chesterfield.—Painting.—At the Poor Law Institution, for Derbyshire C.C. County Architect, Derby. Dep. £2 2s.

Cleethorpes.—Brick Stores.—At Poplar-rd. depot, for U.D.C. L. W. Pye, E. and S.

Greenwich, S.E.10.—Demolition.—And purchase and removal of material contained in the Greenwich Theatre, London-st., for B.C. B.E. and S.

Manchester.—Heating.—And hot-water supply apparatus at mortuary block, Withington Hospital, for T.C City Architect. Dep. £1 1s.

Manchester.—Annexes.—Two bathroom and lavatory annexes to Ward 23, Monsall Hospital, for T.C. City Architect. Dep. £1 1s.

Offaly.—House.—And out-office, at Ballystrig, for the Irish Land Commission. M. Deegan, sec., Upper Merrion-st., Dublin. Dep. £1.

***Oldham.**—Bandstand. Erection of, in Alexandra-pk., for C.B. Chairman of the Parks and Cemeteries Committee, c/o R.E. and S., Town Hall. Dep. £1 1s.

Scotton Banks, near Knaresborough.—Erection of sanatorium, for West Riding C.C. Clerk, County Hall, Wakefield. Dep. £5.

Slough.—Fencing.—Unclimbable iron fencing and gates, Reservoir, Hedgerley, for U.D.C. A. Bromly, E. and S.

Southport.—Beach Bungalows.—5 timber framed, for T.C. A. E. Jackson, B.E. Dep. £1 1s.

Stirling.—Repairs.—For term contract (three years) in Scottish Command. Commander, Royal Engineers, R.E. Office, Craigie, Perth.

Wednesbury.—Welfare Clinic.—At School-st., King's Hill, for T.C. A. Booth, B.E. and S. Dep. £2 2s.

DECEMBER 12.

Adlington.—Houses.—12 non-parlour 3-bedroom, and roads and sewers, Harrison-rd., for U.D.C. S. Dep. £2 2s.

Caernarvon.—Alterations.—And additions to County school. W. Lloyd Jones, County Architect. Dep. £2.

***Essex.**—Erection.—Of new senior school at The Heath, Dagenham, for C.C. J. Stuart, F.R.I.B.A., County Architect, County Hall, Chelmsford. Dep. £3 3s.

Park Royal.—Foundations.—Contract No. 2, for Park Royal Development Co., Ltd. Sir Alexander Gibb & Partners, Queen Anne's Lodge, Westminster, S.W.1. Dep. £10 10s.

DECEMBER 13.

Hull.—Alterations.—And additions to 8 staff cottages at Mental Hospital, Willerby, for T.C. D. Harvey, City Architect. Dep. £1 1s.

DECEMBER 14.

Eastleigh. — Extensions. — And alterations at senior girls' school, Chamberlayne-rd., for Southampton C.C. Clerk, The Castle, Winchester. Dep. £1 1s

Gateshead. — Houses. — And flats on the Saltmeadows estate, for T.C. B.E. Dep. £2 2s.

***Headley.**—Cottages.—Erection of, at Lindford, for Alton R.D.C. A. E. Bennett, Building Surveyor, Lenton-st. Dep. £2 2s.

Lanchester.—Installation.—Of electric lighting in village of Burnhope, for R.D.C. J. J. S. Barker, clerk.

Leighton Buzzard.—Demolition.—Of 4 cottages, numbered 62 to 68, St. Andrew's-st., adjacent outbuildings and walls, for U.D.C. S.

Morley.—Extensions.—To Peel-st. elementary school, for T.C. B.E. Dep. £2 2s.

Southampton. — Erection. — Of foreign bag centre, for H.M.O.W. Room 65D, Third Floor H.M. Office of Works, London, S.W.1. Dep. £1.

DECEMBER 15.

Knockfola.—School.—For Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1.

Lislackagh.—Improvements.—To National School, for Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works, Dublin. Dep. £1.

DECEMBER 18.

Donegal.—Cottages.—20, and fencing plots attached, at Ballyshannon, for County Board of Health and Public Assistance. W. J. Doherty, 12, Castle-st., Derry.

Reading.—Conversion.—Of 65, London-rd. into two flats, for T.C. B.S. Dep. £2 2s.

***Reading.**—Pavilion.—Erection of a tuberculosis pavilion at Park Hospital, for C.B. W. Roland Howell, F.R.I.B.A., architect, 17, Blagrave-st. Dep. £2 2s.

DECEMBER 19.

Dublin.—Cottages.—181 labourers' cottages in former Balrothery Rural District, for Board of Public Health. Engineer to Board, 15, Parnell-sq., Dublin. Dep. £2 2s.

***Peterborough.**—Employment Exchange.—Erection of, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

***Tottenham.**—Erection.—Of football dressing accommodation at Tottenham Marsh, for U.D.C. H. F. Wilkinson, R.E., M.Inst.C.E., Engineer. Dep. £2.

DECEMBER 20.

***Liverpool.**—Dwellings.—Erection of, at Trowbridge-st., for T.C. Director of Housing, Municipal Annexe, Dale-st. Dep. £2 2s.

DECEMBER 21.

***Wigan.**—Employment Exchange.—Erection of, for H.M.O.W. Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Dep. £1.

NO DATE.

Dowderry.—Alteration.—Of house, The Crag, Seaton.

West Deeping.—Wiring.—Of church and school. Rector, West Deeping.

Whiteshill.—School.—Sunday school, for Rushcombe Congregational Church. A. E. Billett, Lyncombe, Whiteshill, Stroud.

MATERIALS, etc.

DECEMBER 4.

Breconshire.—Roadstone, etc.—For C.C. J. M. Richards, C.S., Watton, Brecon.

Bridgwater.—Tarmacadam.—For T.C. R. A. Watson, B.E. and S.

Hornchurch.—Highway Materials.—For U.D.C. F. Alderson, S.

Leeds.—Road Materials.—For Concrete, Ltd., Stourton, Leeds.

Sheerness.—Builders' Materials.—For U.D.C. W. D. Oliver, S.

Southampton.—Road Materials.—For C.C. A. C. Hughes, C.S., Winchester.

DECEMBER 7.

Kilkeel.—Pipes.—206 yds., for R.D.C. J. J. Bell, clerk.

DECEMBER 9.

Montgomery.—Broken Granite.—For C.C. W. O. Jones, C.S., Welshpool.

ENGINEERING, IRON AND STEEL.

DECEMBER 4.

Bundoran.—Water Supply.—Ferro-concrete water tower, filter house, mechanical filters, and works, for U.D.C. P. H. McCarthy, consulting engineer, 26, Lower Leeson-st., Dublin. Dep. £10.

DECEMBER 5.

Egypt.—Water Supply.—At Bouch, for Egyptian Ministry of the Interior (Municipalities and Local Commissions Section). Dept. of Overseas Trade, S.W.1. (Ref. G.Y. 12,995.)

Egypt.—Extension.—Of water-supply system, for Egyptian Ministry of the Interior. Dept. of Overseas Trade, S.W.1. (Ref. G.Y. 13036.)

Machynlleth.—Water Supply.—At Cemmaes, for R.D.C. W .P. Rowlands, clerk, 11, Penrallt-st.

DECEMBER 6.

Buncrana.—Sewerage.—For U.D.C. J. P. M'Grath, E., 1, Newmarket-st., Derry. Dep. £5.

Liskeard.—Reservoir.—And laying of water mains, etc., at Polperro, for R.D.C. E. C. Higman, architect, Barras-st. Dep. £3 3s.

DECEMBER 7.

London.—Girders.—265 tons of steel girders and other iron and steelwork, for G.W.R. F. R. E. Davis, secretary, Paddington Station. Dep. £2 2s.

DECEMBER 9.

Lancashire.—Bridgeworks.—In various districts, for C.C. C.S., Preston.

DECEMBER 11.

New Delhi.—Piling.—For Indian Stores Department. Director-General, India Store Department, Belvedere-rd., S.E.1. Charge 10s.

ROAD, SEWERAGE AND WATER WORKS.

DECEMBER 4.

Carmarthenshire.—Improvement.—Of Link-rd. Newcastle Emlyn, and Newcastle Emlyn—Cardigan-rd., for C.C. T. W. Wishlade, C.S., Carmarthen. Dep. £5.

Swansea.—Piping.—Steam and feed water piping, valves, etc., for new power station at Tir John, for C.B. Preece, Cardew & Rider, consulting engineers, 8-10, Queen Anne's-gate, Westminster, S.W.1. Dep. £5 5s.

Woodford.—Making-up.—Of Grosvenor-gardens, for U.D.C. A. D. Ward, A.M.I.C.E. Dep. £2 2s.

DECEMBER 5.

Egham.—Redrainage.—In various roads, for U.D.C. E. and S.

Esher.—Making-up.—Of Clinton-av., East Molesey, for U.D.C. S. Dep. £3 3s.

London, S.E.—Construction.—Of new road (and sewers) at East Dulwich Estate, Dog Kennel-hill, for L.C.C. Architect, County Hall, Westminster Bridge. Dep. £2.

DECEMBER 6.

Brentford and Chiswick.—Reconstruction.—Of section of Lionel-rd. between Kew Bridge-rd. and the Great West-rd., Brentford, for T.C. L. A. Cooper, B.E. and S. Dep. £3 3s.

Leatherhead.—Making-up.—Kingscroft-rd., Groveside-rd., Dowlans-rd., for U.D.C. E. and S.

Manchester.—Making-up.—Of roads in various districts, for T.C. T.C. Dep. £1 1s.

Scarborough.—Waterworks.—Additional supply of water from flow of water in Forge Valley, East Ayton, and further, for laying 4 in. bore cement asbestos pressure pipe from receiving tank to reservoir, 192 yds., for R.D.C. J. W. Read, clerk, 14, Dean-rd., Scarborough.

Southend-on-Sea.—Sewers.—Surface water sewers area N.W. of Southchurch Park, for C.B. R. H. Dyer, B.E. and S. Dep. £2.

Swansea.—Making-up.—Of St. Illtyd's-cres., Port Tennant, for T.C. J. R. Heath, B.E. and S.

DECEMBER 7.

Derbyshire.—Making-up.—St. John's-av., Chaddesden, Cleveland-av. (part of), Chaddesden, and King Ecgbert-rd., Dore, near Sheffield, for C.C. C.S., St. Mary's-gate, Derby. Dep. £2 2s. each.

Leeds.—Making-up.—Of various roads in district, for T.C. E. W. Cockerlyne, Highways E. Dep. £1 1s.

Luton.—Sewers.—15 in. foul sewer, Selbourne-rd., 18 in. and 21 in. surface water sewer, Old Bedford-rd., River Lee, for T.C. J. W. Tomlinson, B.E. and S., 12, Upper George-st., Dep. £4 4s.

DECEMBER 8.

Cheadle Hulme.—Making-up.—Of Vicarage-av., for Cheadle and Gatley U.D.C. J. Wrest, E. and S. Dep. £1 1s.

Merton and Morden.—Reconstructing.—Main low-level sewer, for U.D.C. G. Jerram, E. and S. Dep. £1.

DECEMBER 9.

Askern.—Making-up.—Of private streets on Instonville estate, for West Riding C.C. C.S., Wakefield. Dep. £1.

Newcastle-under-Lyne.—Roads.—On Clayton-rd. estate, for T.C. J. Griffith, T.C.

Totnes.—Sewers.—300 yds. of 6-in. glazed stoneware, and 530 yds. of 9-in. glazed stoneware, cast-iron and concrete sewers at Dartington, for R.D.C. J. Skinner, E. Dep. £2 2s

Wigan.—Main.—In parish of Wrightington, for R.D.C. E. Arthur Lyne, S., Bank-chams., Wallgate. Dep. £1 1s.

DECEMBER 11.

Bromley.—Improvements.—To Brookmead-av., Cloisters-av. (part), Highfield-rd. (part) and The Fairway, for T.C. B.E. Dep. £1.

Bromley.—Improvements.—In Ridgeway-drive (part), for T.C. B.E. Dep. £1.

Douglas.—Pipe.—7,400 ft. of 39-in. reinforced concrete pipeline, incorporating new Weir, river crossing in 39-in. steel tubes, and an outfall to Leeds and Liverpool Canal in concrete, for River Douglas Catchment Board. R. W. Eaton, E., 1, Jordan-st., Preston. Dep. £2 2s.

Maldens and Coombe.—Making-up.—Of part of South-lane, for U.D.C. E. and S. Dep. £2 2s.

Wimbledon.—Making-up.—Of Dunstall-rd., for T.C. B.E. and S. Dep. £2 2s.

DECEMBER 12.

Altrincham.—Making-up.—Of four roads, for U.D.C. H. E. Brown, S. Dep. £1.

Birmingham.—Sewer.—Roads and sewers at Quinton, for T.C. H. H. Humphries, City E. and S. Dep. £2.

Hornchurch.—Making-up.—Of Standen-av., Dawes-av. and Crystal-av., for U.D.C. F. Alderson, S.

Southport.—Making-up.—Of Bibby-rd., for T.C. A. E. Jackson, B.E. Dep. £2 2s.

NO DATE

Southampton.—Making-up.—Of Butterfield-rd., Athelstan-rd. (part of), Bassett-gardens, for C.B. B.E. Dep. £1 10s. 6d.

Public Appointments.

DECEMBER 16.

***March, Cambs.**—Clerk (Temporary).—For Isle of Ely C.C. R. D. Robson, A.R.I.B.A., County Architect.

***March, Cambs.**—Architectural Assistant (Temporary).—For Isle of Ely C.C. R. D. Robson, A.R.I.B.A., C.A.

***Southern Rhodesia.**—Town Planning Officer.—For Government. Official Secretary, Office of the High Commissioner for S. Rhodesia, Crown House, London, W.C.2.

The finest Paint for inside or outside work.
GRIFFITHS BROS. & CO. LONDON LTD
Macke Road, Bermondsey, S.E.16
'PHONE. BER. 1151

CURRENT AND PROPOSED BUILDING WORK*

Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Annfield Plain.—Work to start early in New Year on pithead baths at Morrison Pit at £10,000. No contracts placed. J. H. Forshaw, architect to the Miners' Welfare Committee, Dean Stanley-st., London, S.W.1.

Annfield Plain.—U.D.C. received approval to erection of houses for old people and for borrowing of £3,876 for land and 16 bungalows on site at Dipton.

Armagh.—Tenders to be invited for sewage disposal works estimated to cost £30,000. Engineers, Taylor and Wallin, 1, Saville-place, Newcastle-on-Tyne.

Ashburton.—U.D.C. recommend purchase from A. H. Satterley, for housing purposes, of field in Roborough-lane, subject to approval of M.H.

Bakewell.—R.D.C. approved plans for institute at Money Ash, for Ladies' Guild.

Basingstoke.—T.C. approved:—Additions to factory, Worthing, Auto Tyre Services, Ltd.; swimming pool and buildings in connection with same, at By-pass-rd. (Grove-rd.), Venture, Ltd.

Birmingham.—Yardley Wood Baptist Church acquired site, Yardley Wood-rd., for church. E. Nightingale, architect, 108, Sandmere-rd., Yardley Wood. Cost £5,000.—Parkinson Stove Co., Ltd., Station-rd., Stechford, propose extensions to works in First-av. Cost £3,000.—Mitchell & Butlers, Ltd., brewers, Cape Hill Brewery, Smethwick, propose licensed premises corner of Station-rd. and Lyttleton-rd., Stechford.

Birmingham.—Site been secured near Hagley-rd. junction on new Wolverhampton-rd., Birmingham, for new Anglican church. About 200 yards from site, at junction of Bleakhouse-rd., Roman Catholic church in course of erection. Architects for this are Leonard Stokes & Drysdale, and builders are W. J. Whittall & Sons, Ltd., of Birmingham.

Bognor.—U.D.C. proposing to sell to C.C. land for school.

Bolton.—J. Gerrard & Sons, Ltd., Swinton, Manchester, propose development of Ferns estate for 70 houses.

Boston.—Holland C.C. adopted recommendation of Public Health and Housing Committee that nurses' home be provided at Sanatorium, at £2,000, double verandah to accommodate fourteen patients, £500; surgical block, £4,500; heating and sanitary accommodation, £1,300.

Brentwood.—U.D.C. to purchase Shenfield Lodge, Ingrave-rd., for municipal offices. Inquiry into sanction to borrow £2,800 for purchase and £1,200 for adaptation and equipment been held by M.H.

Briggate.—Sanction for borrowing been received by U.D.C. for reconditioning 29 houses in improvement area.

Canvey Island.—S. to U.D.C. to produce plans for swimming pool.

Cardiff.—Property Committee of City Council to spend £5,000 on extension to City Hall in form of two-storied building in the quadrangle.

Carlisle.—Provincial Insurance Co., Ltd., Stramongate, Kendal, acquired property known as "Lord Brougham" inn at corner of Warwick-rd. and Crosby-st. for offices on site. H. Irving Graham, 15, Bank-st., architect. Tenders invited.

Carlisle.—No contracts been placed for offices, corner of Warwick-rd. and Crosby-st., for Provincial Insurance Co., Ltd. Architect, H. I. Irving, 15, Bank-st.

Christchurch.—M.H. held inquiry into T.C.'s scheme for alterations and additions to Town Hall, at £2,130.

Colwyn Bay.—Council to proceed with £70,000 scheme of redevelopment which was proposed following fires which destroyed municipal pier and Bijou Theatre.

Coventry.—General Works Committee recommend, subject to assurance being received of 75 per cent. grant from M.T., approval be given to bridge at Bedlam-lane and an improvement of Beechwood-ave bridge at £29,000.—Watch Committee recommend:—That land near Tile Hill be purchased for site for policemen's houses.

Crewe.—T.C. received sanction to borrow £7,207 for 16 houses, Goulden-st.

Croydon.—C.B. received sanction from M.H. to borrowing following:—£3,800, Windmill-rd., houses and flats; £20,430, extensions of Mayday Hospital (building work), and £36,011 (engineering work); £2,145, alterations and improvements, Queen's-rd. Institution; £34,900, erection of dwellings, Old Town clearance area.—Plans passed:—E. W.

*See also List of Contracts Open.

***** In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced.**

Scratchley, 141, Brigstock-rd., alterations to form hall, Old Post Office, Melfort-rd.; Midland Bank, Ltd., Poultry, E.C.2, alterations and additions, 258, London-rd.; Express Dairy Co., Ltd., 30, Tavistock-place, W.C.1, alterations and additions, 1, Westow-st.; Corporation, 50 houses, 36 flats, Old Town, 10 flats, Windmill-rd. and Beulah-grove, louge, Grange Wood recreation ground; C. H. Gibson, Ltd., 509, London-rd., alterations to form club and 2 shops, 11, Southbridge-rd.; Gower Builders (London), Ltd., Shirley-way, 5 garages, 1 to 9, Bennett-av.

Darlington.—T.C. to be asked to sanction £310 for separate domestic hot water system at main block of Municipal Institution.

Derby.—Arthur Eaton & Son, F.R.I.B.A., architects, 6, The Strand, preparing plans for alterations to "St. Helen's" public-house, Duffield-rd., for Home Brewery Co., Ltd., Daybrook Brewery, Nottingham. Cost £4,000 to £5,000.

Dronfield.—Hallowes Golf Club sold 54 acres of its land to Wilcockson & Cutts, architects, of Chesterfield. Purchaser's intention is to develop land as building estate.

Dudley.—Corporation sold six acres of land on Birmingham to Wolverhampton-road to Dudley, ironfounders, of Groveland-rd., Dudley Port, who propose to erect works.

Ealing.—Plans passed:—30 houses, Langdale-gdns., Western-ave., R. Lancaster & Son, 30, Ealing-rd., Wembley; 228 houses, Wood End-gdns., F. Taylor, junr., & Co., Ltd., architect, J. M. Wilson, Western-chams., Station Approach, Hayes; 27 houses, Rydal-cres., B. Smith & Son, Ltd., Estate Office, Halsbury-rd., West Northolt; Catholic hall, Greenford-rd., Rev. Kennedy, builders: Boyd & Murley, Ltd., 87, London-st., Reading; additions to premises, The Broadway, Ruislip-rd., Greater London Properties, Ltd., architect: E. R. Taylor, 5, Manchester-sq., W.1; power house, Waxlow-rd., H. J. Heinz & Co., Ltd., architect: H. Goslett, 28, Theobalds-rd., W.C.1; additions to factory, British Bath Co., builders: Kelvin Construction Co., Ltd., Long-drive, Greenford.

Fleetwood.—Fleetwood Industrial Co-operative Society, Ltd., Kemp-rd., proposing milk sterilisation factory, Blakiston-st. Plans by C. Atkinson, 115, Darbishire-rd.

Gateshead-on-Tyne.—It is proposed to proceed with premises in High-st. for Doggart, Bishop Auckland. Architects, George Baines & Son, 121, Victoria-st., Westminster, S.W.1.

High Wycombe.—New housing estate, with 320 houses, to be constructed. Council bought land on west side of town for further estate, to be known as Plomer Hill estate.

Holmes Chapel.—Cheshire Joint Board of Mentally Defective, County Offices, Northgate-st., Chester, propose on Cranage Hall estate 7 homes, 2 workrooms, school, staff residence and other buildings with main drains, roadways, etc. Architects, T. Taliesin Rees & Richard Holt, 64, Rodney-st., Liverpool. Tenders invited.

Hunsworth.—U.D.C. approved:—Lay-out for 32 houses, Moor Ville, Bradford-rd., G. R. Atkinson.

Kettering.—Kettering Clothing Manufacturing Co-operative Society, Ltd., Dryden-st., propose extensions to clothing factory. Plans by H. P. Cook, of R. J. Williams & Co., architects, Park Style-chams., Market-st. Contracts not let.

Leeds.—Extensions to be carried out at Marlbeck House factory for Marshalls, Ltd., Leighton-lane. Plans by Braithwaite & Jackman, South Parade. Tenders to be invited.

Leicester.—Markets Committee propose municipal abattoir. Plans by Ayling & Castley, L.R.I.B.A., 53, Victoria-st., London, S.W.1.

Liverpool.—Community hall for Norris Green is projected in plans drawn up by Community Council and submitted to Corporation. It is proposed to erect building in Townsend-av. East. Cost is about £10,000.

Llandudno.—Council to consider more houses. Housing Committee asked S. to obtain price of certain suitable land belonging to Mostyn estate.

London.—L.C.C. recommend:—£92,000 in respect of reorganisation of Western pumping station and King's Scholars' pond pumping station.

London (Bermondsey).—L.C.C. sanctioned borrowing by B.C. of £12,529 for housing at Tanner-st. and Davis-buildings.—B.C. to purchase properties adjoining Elim-st clearance area and 15 to 25, Hargreave-sq., and 20 and 20b, Alice-st.—Plans passed:—Conversion of "King's Head" public-house, Long-lane, into three self-contained flats.—Council recommend:—Sketch plans for 12 lock-ups on Leroy-st. areas.—Revised lay-out plan for two blocks of flats on Harold estate extension been approved.

London (City).—Corporation recommend works of ventilation to basement of 53, Charterhouse-st. at £200 10s.

London (Dulwich).—L.C.C. recommend £336 for messroom, etc., at Constance-rd. institution.

London (Fulham).—B.C. received Electricity Commissioners' sanction to £863 for St. James' Home sub-station.—Application to be made to Commissioners for £1,710 for sub-station at 173, Dawes-rd.—Plans passed:—W. Cave, F.R.I.B.A., garage, 5, Gliddon-rd.

London (St. Pancras).—B.C. received sanction of Electricity Commissioners to borrow £1,076 for transformer sub-station, Leighton-rd. housing estate.—B.C. recommend tenders be invited for repairs and decorations at Council's dwellings.—L.C.C. sanctioned application of B.C. to borrow £2,283 for the Somers Town and Chester-rd. housing schemes.

London (Stepney).—L.C.C. sanctioned borrowing of £6,804 for Limehouse Fields housing scheme.

London (Woolwich).—B.C. are considering various clearance schemes, and to make application to L.C.C. for borrowing £65,199 for road schemes.—Drainage plans, etc., passed: Additions to "Yorkshire Grey" public-house, Eltham-rd., Eltham, Halse & Sons, Ltd., 95, Shaftesbury-av., W.1, for Taylor, Walker & Co., Ltd.; H. Darby & Son, 71, Lea Bridge-rd., Leyton, E.10 (on behalf of Mother Superior of the Convent), additions to St. Clotilde Convent, Glenure-rd., Eltham; J. Ellman & Son, Ltd., 102, Bromley-rd., Beckenham (on behalf of Lever Bros., Ltd.), additions to sports pavilion, Sparrows-lane, Eltham; Sykes & Pomfret, 8, Park-place, Eltham (on behalf of Lincoln Darby & Co.), 53 garages, Crossmead and Sidcup-rd., Eltham; Dyer, Son & Creasey, 24, Budge-row, E.C.4 (on behalf of Lincoln Darby & Co.), conversion of 4 houses into shops with second story flats over, 190-196, Court-rd., Eltham; E. S. Pritchard, 27, The Grove, Hammersmith, W.6 (on behalf of G. Wimpey & Co., Ltd.), 89 houses, Jackson estate, Plumstead.

Macclesfield.—H. Quentery Farmer, L.R.I.B.A., 102, Brook-st., Cumberland-st., been appointed for infants' school in Moss-lane for E.C.—E.C. propose extensions of Athey-st. Council school for mentally defective and backward children. Plans by B.S.

Malpas.—C. Ogilvie Campbell, architect and surveyor, District Bank-chams., Chester, been appointed to prepare plans for fire station for R.D.C.

Meopham.—Parochial church council approved estimates for lych gate at entrance to new burial ground. Designs from Sir Herbert Baker, R.A., been considered

Middlesbrough.—Archibald and Archibald, 26, Albert-rd., prepared plans for additions at 171, Albert-rd., belonging to Master Builders' Association. No contract arrangement made.—Same architects prepared plans for alterations to Newport Working Men's Club, 27, Ayrsome Grange-rd. No contracts.—Plans being prepared by Kitching and Co., 21, Albert-rd., for lay-out building estate in Green-lane area. Builders will be W. A. King & Sons, Westbourne-grove, North Ormesby.—Preliminary plans by Kitching & Co., for shops and offices in Eastbourne-rd., for Palladium (Middlesbrough), Ltd. No contracts placed.—Plans for 20 lock-up shops being prepared by W. E. Schumm, architect, 49, Albert-rd.—T.C. has proposal under consideration for swimming baths and branch library on site of old police station, North Ormesby. B.E.

Middlesex.—C.C. to spend £2,783 on fencing land acquired for extensions of Western-av.—Work to cost £1,290 to be carried out at North Middlesex County Hospital.—C.C. recommend £1,380 for heating infirm wards at Edmonton House.—County Architect to modernise science room at Winchmore Council school, Winchmore Hill, for E.C., at £325.—Stage classrooms to be built at North Southall school at £1,500. Plans by County Architect.—Works to cost £1,300 to be carried out at Shenley Mental Hospital.—£1,000 to be spent on repairing stonework at Guildhall, S.W.1.

Mold.—Vicar, the Rev. R. Mackenzie Williams and Parochial Council propose church hall.

Montgomery.—The E.C. propose extensions, Berriew Council school. L. Phillips, Clerk to Education Authority, Newtown.

Newcastle-on-Tyne.—Dr. Ehrlick's School, Parkter., Jesmond, been sold to E. M. Taylor, estate agent, and to be converted into premises and flats.—Extensions to be made to St. Aloysius R.C. school. Architect, R. Burke, 12, Grey-st.—Tenders to be invited shortly for extensions of premises for H. Moat & Sons, Rutherford-st. J. W. Taylor, St. John-st., architect.

Northfleet.—U.D.C. considering enlarging council offices and erecting new chamber.

Northumberland.—A. Cheyne, C.S., Newcastle, to prepare a scheme for a bridge over Dukesfield Ford.

Polesworth.—Warwickshire E.C. propose two additional classrooms, etc., at Central School. Plans by County Architect, A. C. Bunch, F.R.I.B.A., Shire Hall, Warwick.

Preston.—P. R. Broadhead, Harewood Lodge, Carlton-rd., Whalley Range, Manchester, propose improvements at King's Theatre. Plans by own Architectural Staff.

Rochdale.—Wilson's Brewery Co., Ltd., Newton Heath Brewery, Monsall-rd., Manchester, propose alterations to "Blue Bull" hotel, Edenfield-rd., Bagslate, Norden. Plans by Resident Architect, C. W. Highfield, Brewery Offices.

Rugby.—Board of Harborough Magna Isolation Hospital propose extensions. Cost £10,000.—County Architect, A. C. Bunch, Shire Hall, Warwick, been instructed by County Council to obtain tenders for alterations at Rugby Divisional police headquarters.

St. Helens.—T.C. proposing open-air bath at Taylor Park lake.

Scarborough.—M.H. sanctioned 57 houses by T.C. in connection with Albion-st. and Brook-st. improvement schemes. J. P. Watson, B.E.—Sanction to borrow £18,284 for improvements to bathing pool being sought by T.C. Plans by B.E.

Selby.—R.D.C. adopted five years' scheme of slum clearance, involving 80 houses.—M.H. sanctioned borrowing by Council of £8,080 for 26 houses.

Sheffield.—Board of Governors of University given instructions for men's hall of residence at Oakholme site, Clarkehouse-rd., at £38,650. Architect, J. C. Proctor, 40, Clarendon-rd., Leeds 2.—Court of Governors of University propose extension of Western Bank buildings at £8,000.

Slough.—U.D.C. to build new offices.

South Elmsall.—Plans approved by R.D.C. for extensions at Warde-Aldam Hospital.

Southport.—Plans of projected ballroom on Winter Gardens old site been submitted to Corporation. Estimated cost, £30,000.

Stockport.—T.C. propose 124 houses at £50,000.

Stoke-on-Trent.—Tenders being invited by Miners' Welfare Committee for pithead baths at Park Hall Colliery, near Longton. Tenders by Dec. 19th. Plans by J. H. Forshaw, architect to Committee, Dean Stanley-st., London, S.W.1.

Stokesley.—R.D.C. agreed that a scheme of slum clearance be submitted to M.H. List of 40 houses recommended at £13,000.

Sunderland.—Borough Housing Architect has plans in hand for 26 houses and 64 flats, Leechmere-rd., Ford estate.—Finance Committee of T.C. not to raise any objection to £54,000 scheme proposed for reconstruction and diversion of Roker Gill sewer and reconstruction of Seaburn sewer outfall at £10,000. Plans by T. P. Collinge, B.E.

Sutton and Cheam.—U.D.C. seeking authority to borrow £50,000 for bathing pool, Malden-rd., Cheam.

Swanscombe.—To build new swimming bath, and considering new fire station and public library.

Tottington.—Co-operative Society, Ltd., 33, Chapel-st., propose alterations to drapery department, Market-st. Plans by Architects' Dept., C.W.S., Ltd., Balloon-st., Manchester. Tenders invited.

Upholland.—Rev. F. Turner, Upholland College, proposes Church of Little Flower on adjacent site to college.

West Hartlepool.—T.C. procured site from L.N.E.R. Co., near railway station for bus station. F. Durkin, B.E.—Proposal to extend nurses quarters, Howbeck Institution at £5,000 being considered by P.A.C. F. Durkin, B.E.

Whickham-on-Tyne.—J. H. Moore, builder, proposes 28 houses, Beech-grove.

Wolsingham.—Parish Council proposes applying to M.H. for sanction to extensions to Town Hall at £3,000 and to include conveniences.

Wolverhampton.—Slater & Bodega, Ltd., 18-24, Kensington High-st., London, W.8, propose "Bodega" hotel, Dudley-st. Architect, S. A. S. Yeo, A.R.I.B.A., 56, Strand-bldgs., Turnmill-st., London, E.C.1.

TRADE NEWS

The "Regal" Cinema, Wimbledon.

Heating and ventilation work at this cinema was carried out by the Norris Warming Co., Ltd. We regret that the firm's name was inaccurately spelt in our last issue.

The large window at the front of this cinema (illustrated in our last issue) is divided by black faience columns, and the black and cream banded base is of the same material. The faience was supplied by Messrs. Shaws Glazed Brick Co., Ltd., of Darwen, Lancs. It is of particular interest to note that the black faience columns, 2 ft. 11½ in. in diameter, are made without a vertical joint, which has been commented upon as a great achievement in faience production.

New London Showrooms.

Messrs. Parker, Winder and Achurch, Ltd., have removed their London showrooms and offices to No. 8, Great Marlborough-street, Regent-street, W.1. The telephone number remains the same—Gerrard 5466. To celebrate this occasion a dance and social evening was held by the staff and friends. Mr. C. G. Harris very ably proposed the toast of "The Company," Mr. A. J. H. Binns, London manager, replying. The company was started in Birmingham about a century ago, and is progressing in all departments under the able direction of the chairman and managing director, Mr. G. Philip Achurch, M.B.E., and the board of directors, the majority of whom have been connected with the company for many years.

PRICES CURRENT OF MATERIALS.

Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by enquiry

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 3 6
Second Hard Stocks	3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
"Phorpres"	2 11 3	Flettons, B'll'n'se	3 6 3
Flettons at King's Cross	2 11 3	Best Blue Pressed Staffs	9 5 0
Do., grooved for Plaster	2 13 3	Do. Bullnose	9 15 0
		Blue Wire Cuts	7 5 0

White Midhurst Facing Bricks (delivered London site) 5 0 0
"Phorpres" Whites (do.) 3 17 3
"Phorpres" Rustic Facing Bricks, delivered Central London ..... per 1,000 3 12 3
Best Stourbridge Fire Brick :—
2½ in. ..... 8 11 0 3 in. 10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
		One side and two Ends	30 10 0
Headers	20 10 0	Two sides and one End	31 10 0
Quoins, Bull-nose and 4½ in. Flats	27 10 0	Splays and Squints	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

CLINKER CONCRETE.

2" per yd. sup.	1 6	3" per yd. sup.	2 0
2½" " "	1 8	4" " "	2 4

CRANHAM TERRA COTTA.

2" per yd. sup.	3 0	3" per yd. sup.	3 8
2½" "	3 6	4" " "	4 7

HEMPSTEAD—KEYED TWO SIDES.

2" per yd. sup.	3 3	3" per yd. sup.	3 9
2½" " "	3 6	4" " "	4 3

	s. d.	
Thames Ballast	6 6 per y.d.	delivered 2 miles radius Paddington.
Pit Ballast	5 6 " "	
Pit Sand	7 0 " "	
Washed Sand	7 6 " "	
¾ in. Shingle	6 6 " "	
¾ in. Broken Brick	10 6 " "	
Pan Breeze	7 6 " "	

CEMENT.

Per ton delivered in London area in full van loads.

Best Portland Cement, British Standard Specification. Test	£2 4 9
In Jute Sacks (11 to ton)	£2 4 9
In Paper Bags (20 to ton)	2 6 0

Colorcrete No. 1 & 2 Coloured Rapid Hardening Portland Cement in 1 cwt. paper bags free (non-returnable) 20/- per ton above Portland Cement Price. "Snowcrete" White Portland Cement in 1 cwt. paper bags free (non-returnable) 175/- per ton.

Alongside Vauxhall in 80 Ton Lots.

Jute Sacks (11 to ton)	17 9
Paper bags (20 to ton)	1 19 0
Ferrocrete per ton extra on above	0 7 6
Vitrocrete per ton extra on above	0 7 6

NOTE.—Jute Sacks are charged 1s. 6d. each and credited 1s. 6d. each nett if returned in good condition within three months, carriage paid.

Super Cement (Waterproof) Paper Bags free	1 16 0
Roman Cement	0 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" Pink	5 10 0

PLASTER.

Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	4 12 0
Sirapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	2 5 0
Chalk Lime	2 5 0
Best Ground Blue Lias Lime	1 17 6
Hair ..... per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 6d. each and credited 1s. 6d., if returned in good condition within three months carr. pd.

Stourbridge Fireclay in sacks 37s. 0d. per ton at rly. dep.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R, per ft. cube	2 10
BEER STONE—RANDOM BLOCK— Free on rail at Seaton Station, per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. per ft. cube	3 1½

Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra

PORTLAND STONE—

Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4½
Do. do. delivered on road waggons at above stations, per ft. cube	4 5½

White basebed, 3d. per ft. cube extra.

NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE—

	s. d.
F.O.R. Quarries Wirksworth, Derbyshire. Random blocks from 10 ft. and over P.ft.cb	14 0
Sawn two sides	22 6
Sawn three or four sides	27 6

CHILMARK—RANDOM BLOCK— s. d.

At Nine Elms, per ft. cube	3 11

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station London.

6 in. sawn two sides landings to sizes (under 30 ft. super)	Per ft. super	5 6
6 in. rubbed two sides, ditto	"	6 0
3 in. sawn two sides slabs (random sizes)		2 8½
2 in. to 2½ in. sawn one side slabs (random sizes)		1 6½
1½ in. to 2 in. ditto		1 3½

HARD YORK—
Delivered at any Goods Station, London.

Scappled random blocks	Per ft. cube	6 8
6 in. sawn two sides landing to sizes (under 40 ft. super)	Per ft. super	1 1½
6 in. rubbed two sides, ditto	"	6 1½
4 in. sawn two sides slabs (random sizes)	"	3 1½
3 in. ditto ditto	"	2 8
2 in. self-faced random flags	Per yd. super	8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills 10s. 0d.

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.	Per stan.	Inches.	Per stan.
4 × 11	£23 10	3 × 6	£17 10
4 × 9	22 10	3 × 11	19 10
4 × 8	21 0	2 × 11	19 10
4 × 7	19 0	3 × 9	19 10
3 × 8	18 0	2½ × 9	19 10
3 × 7	18 0	3 × 4½	17 10
2½ × 7	18 0	3 × 4	17 10

PLANED BOARDS.

1 × 11	£22 10	1 × 9	£21

PLAIN EDGE FLOORING.

Inches.	Per sq.	Inches.	per s.
⅝	16/-	1¼	25/-
¾	17/-	1½	27/6
1	20/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	21/-
1¼	26/-
1½	27/6

MATCHING (BEST).

Inches.	per sq.
⅝	16/-
¾	18/6
1	22/6

ins	BATTENS,	s. d.
¾ × 2	... per 100 ft.	2 6

SAWN LATHS. s. d.
Per bundle 2 3

HARD WOOD.

1 INCH AND UP THICK.
Average price for prime quality.

	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt.	4 7 0 to 5 10 0

SLATES.

First quality slates from Bangor or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	29 15 0	18 by 10	15 12 6
22 by 12	25 0 0	18 by 9	13 15 0
22 by 11	22 10 0	16 by 10	13 10 0
20 by 12	22 0 0	16 by 8	10 7 6
20 by 10	19 7 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons.

	Per 1,000 f.o.r. London.
Best machine-made tiles from Broseley or Staffordshire district	£4 7 0
ditto hand-made ditto	5 0 0
Ornamental ditto	5 8 6
Hip and valley tiles (per dozen) Hand-made	0 9 6
Hip and valley tiles (per dozen) Machine-made	0 9 0

METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£11 0 0
Plain Compound Girders	12 0 0
Stanchions	15 0 0
In Roof Work	18 0 0

MILD STEEL ROUNDS.—To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
½ in.	12 0 0	⅝ in. to ½ in.	10 15 0
⅜ in.	11 0 0	⅝ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars Sizes ⅛in. to 6in.	Genuine Wrot. (Puddled) Iron Tubes and Tubulars Sizes ⅛in. to 6in.	Standard Fittings Sizes ⅛in. to 6in.	Standard Flanges Sizes ⅛in. to 6in.
	%	%	%	%
Gas	65	52½	57½	70
Water	61½	48½	52½	65
Steam	57½	45	47½	60
Galv. gas	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	42½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Price ex Works

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/4	1/0	4½d.
3½ in.	1/5	1/1½	5d.
4 in.	1/5	1/2½	6d.
4½ in.	1/6	1/4½	8½d.
5 in.	1/9	1/6½	9d.

O.G. GUTTERS.

3 in.	1/6	1/4	6½d.
3½ in.	1/8	1/4	7d.
4 in.	1/9	1/4½	7½d.
4½ in.	1/10	1/7½	8½d.
5 in.	2/2	1/10½	10½d.

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles	Branches, stock angles
2 in.	2/0	1/2½	1/9½
2½ in.	2/1	1/4½	2/2
3 in.	2/7	1/9	2/7½
3½ in.	3/0	2/1½	3/0½
4 in.	3/5	2/6	3/8½

Less 20 per cent. trade discount.
Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Stock.

	Pipe,	Bends, stock angles,	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts.	2 5	1 9	2 1½
2½ in. "	2 9½	1 11	2 7½
3 in. "	3 0	2 1½	3 1½
3½ in. "	3 2½	2 7½	3 8
4 in. "	3 8	2 11½	4 2½

L.C.C. COATED DRAIN PIPES—London Prices ex Stock.

	Pipe,	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths	3 0	4 6	7 0
4 in. " cwt. qr. lbs.	1 1 20	4 9	5 6	8 9
5 in. "	1 2 22	5 10	9 6	13 6
6 in. "	2 0 6	6 10	12 0	18 0

Gaskin for jointing 41/- per cwt.

IRON—	Per ton in London. £ s. d.		£ s. d.
Common bars	10 0 0	to	10 10 0
Staffordshire Crown Bars— Good merchant quality	10 10 0	to	11 0 0
Staffordshire Marked Bars	14 0 0	...	15 0 0
Mild Steel Bars	9 0 0	...	10 0 0
Steel Bars, Ferro-Concrete quality, basis price	8 0 0	...	9 0 0
Hoop iron, basis price	11 0 0	...	12 0 0
" Galvanised	27 0 0	...	28 0 0
Soft Steel Sheets, Black— Ordinary sizes, to 20 g	11 0 0	...	11 10 0
" " " 24 g.	12 0 0	...	13 0 0
" " " 26 g.	14 0 0	...	15 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	13 0 0	...	14 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	14 0 0	...	15 0 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	17 0 0	...	18 0 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 9 ft. to 20 g.	13 0 0	...	14 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	14 10 0	...	15 10 0
Ordinary sizes, 6ft. to 9 ft. to 26 g.	16 0 0	...	17 0 0
Sheets, Galvanised Flat, Best quality— Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	16 10 0	...	17 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	18 10 0	...	20 10 0
Best Soft Steel Sheets, 26 g.	20 0 0	...	21 10 0
Cut Nails, 3 in. to 6 in.	15 0 0	...	16 0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

		s. d.
Seamless Copper tubes (basis)	per lb.	0 9
Strong sheet	"	0 10
Thin	"	0 11
Copper nails	"	1 0
Copper wire	"	0 11

PLUMBERS BRASS WORK.

Delivered in London

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
29/-	45/-	76/-	153/-	246/-	510/-	per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.	
41/6	62/-	92/-	174/-	300/-	588/-	per doz.

The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—*(contd)*.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/-	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES S.F.

½ in.	¾ in.	1 in.	1½ in.	1¾ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH GRASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.	
8 lbs. P. traps	33/-	41/-	56/-	101/-	per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/-	,,

TIN.—English Ingots, 2/1 per lb. SOLDER—Plumber, 11d., Tinmen's, 1s., Blowpipe, 1/1 per lb.

LEAD, &c.

(Delivered in London.)	£	s.	d.
LEAD—Sheet, English, 4 lb. and up	20	0	0
Pipe in coils	17	0	0
Soil pipe	24	0	0
Compo pipe	24	10	0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 4s. per cwt. extra, and over 3 cwt. and under 5 cwt., 2s. 6d. per cwt. extra. Cut to sizes 4s cwt. extra.

Old lead, ex London area, at Mills .....per ton £10 0 0

PAINTS, &c.

	£	s.	d
Raw Linseed Oil, in pipes .....per gallon	0	2	2
,, ,, ,, in barrels ..... ,,	0	2	4
,, ,, ,, in drums ..... ,,	0	2	7
Boiled ,, ,, in barrels ..... ,,	0	2	7
,, ,, ,, in drums ..... ,,	0	2	10
Turpentine, in barrels ..... ,,	0	3	11
,, in drums (10 galls.) ,,	0	4	1
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)	45	0	0

Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

GENUINE WHITE LEAD PAINT.

"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered £ 63 s. 0 d. 0

Red Lead, Dry (packages extra) ... per ton	32	0	0
Best Linseed Oil Putty .....per cwt.	0	13	6
Size. XD quality .....fkn.	0	3	0

VARNISHES, &c.

		Per gallon		
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal.....	ditto	1	0	0
Pale Opal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	0
Fine Copal Flatting.....	ditto	1	0	0
Hard Drying Oak	ditto	0	18	6
Fine Hard Drying Oak	ditto	0	19	6
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	6
Best ditto	ditto	1	2	6
Best Japan Gold Size.....		0	12	0
Best Black Japan		0	10	0
Oak and Mahogany stain (water)		0	12	6
Brunswick Black		0	7	0
Berlin Black		0	14	0
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebene		0	9	0
Cuirass Black Enamel.....		0	7	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

per ft.		Per ft.	
15 oz. fourths	2¾d.	32 oz. fourths	6¾d.
15 ,, thirds ...	2¾d.	32 ,, thirds	8¼d.
21 ,, fourths	3¼d.	Obscured Sheet, 15 oz....	3d.
21 ,, thirds ...	3¾d.	,, ,, 21 oz....	4¼d.
26 ,, fourths	4¼d.	Fluted, 15 oz. 6¼d., 21 oz.	9d.
26 ,, thirds ...	5¼d.	Em'ld, 15 oz. 4¼d., 21 oz.	5¼d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES. Per ft

Rolled plate ⅛ in.	4¼d.
Rough rolled ¼ in.	5¾d.
Rough rolled ⅜ in.	5¾d.
Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5¼d.
Ditto, tinted	8d.
Rolled Sheet	4¾d.
White Rolled Cathedral	4¾d.
Tinted do.	6¾d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	Per foot. s.	d.
Clear sheet—not exceeding 1 foot	1	0
Do. do. 2 feet	1	3
Do. over 2 feet	1	9
Polished plate—not exceeding 1 foot	1	6
Do. not exceeding 2 feet	3	0
Cathedral—not exceeding 1 foot	1	0
Do. larger sizes	1	6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1	0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide.....	2	6

THE SCOTTISH BUILDER

HOUSING PROGRESS

THE following figures show the progress that has been made in State-aided housing schemes in Scotland to October 31, 1933:—

	Completed.	Under construction.
1919 Act—	25,129	—
Do. (by public utility societies)	421	—
Private subsidy schemes 1919 (Additional Powers) Act	2,324	—
1923 Act—		
By local authorities ...	4,016	—
By private enterprise ...	27,523	1,936
By public utility societies	80	—
1924 Act—		
By local authorities ...	67,598	6,448
By private enterprise ...	5,564	2,494
By public utility societies	143	—
Slum Clearance—		
(1) 1923 Act	15,955	834
(2) 1930 Act	9,460	7,960
Not yet allocated between 1924 and 1930 Acts ...	126	114
1931 Act—		
By local authorities ...	98	326
1933 Act—		
By local authorities ...	—	126
Demonstration Houses ...	17	—
Steel houses erected on behalf of Government by Scottish National Housing Company	2,552	—
	161,006	20,238

NEW BUILDINGS

ABERDEEN.—CHURCHES.—The scheme of the General Assembly of the Church of Scotland for raising £180,000 for the erection of 30 new churches and 20 halls throughout the country was approved at a conference in Aberdeen.

AYR. — STATION. — The Corporation have schemes on hand for new hotel, 'bus station, etc. Mr. J. Young, Burgh Architect.

BLACKHALL. — CHURCH. — Plans and schedules are in hand for the new St. Columbus Church. Mr. J. Jeffrey Waddell, architect and surveyor, 95, Bath-street, Glasgow.

BUCKHAVEN.—HOUSING.—The T.C. has decided to build 100 houses as part of their five years' housing scheme. Mr. E. Forsyth, Methil, is the architect for the first lot of 50 houses, including one block of one-room houses for elderly people.

DALKEITH. — HOUSES. — The Corporation are to erect a scheme of houses, 1,221 in number. Mr. J. Aikman Swan, architect, 7, St. Coline-street, Edinburgh.

DUMBARTON. — HOUSES. — Plans are in hand for a new scheme of 100 houses on a site to be fixed. Mr. A. W. Jeffrey, Council Architect and Engineer.

DUMFRIES.—EXTENSIONS.—Plans are in hand for reconstruction and extension to the Ryedale Mills. Mr. James Bowie, architect, Crofthill, Dumfries.

DUNOON. — HOUSING. — The Corporation have a new housing scheme at Argyll-street. The plans are by Mr. G. Rodger, Burgh Architect and Surveyor.

EDINBURGH.—BATHING POOL.—The T.C. are again considering the construction of a bathing pool at Portobello. The pool is estimated to cost about £50,000.

EDINBURGH.—HALLS.—Plans are in hand for new church halls, etc., for St. Leonard's, Newington. Mr. J. Jeffrey Waddell, architect and surveyor, 95, Bath-street, Glasgow. —Plans are in hand for new office buildings at Rosetown-terrace and Russell-road. Mr. J. R. Mackay, architect and surveyor, 4, Melville-street, Edinburgh.

FALKIRK. — SHOWROOM. — Plans for a £3,000 building were passed by the Dean of Guild Court. The application is for warrant to erect a garage and showroom at West Bridge-street, and the petitioners were Messrs. Thomas Laurie and Co., Ltd., motor and electrical engineers.

GLASGOW. — EXTENSION. — Plans are in hand for the reconstruction and extension of Old Suthin police offices, with training centre, barracks for police recruits, and classroom, baths, etc. Mr. Thomas Somers, architect, Office and Public Works.

GLASGOW.—BANK.—Plans are in hand for new Royal Bank to be erected at Maryhill. Messrs. F Burnet and Boston, architects, 180, Hope-street.

GLASGOW. — HOUSING. — Plans involving the erection of 20,000 houses—12,000 to relieve overcrowding and 8,000 for slum clearance —have been approved by the Corporation Housing Committee.

GREENOCK.—GARAGE.—Plans are in hand for a new garage and motor engineers' workshop at Crawford-street. Mr. A. Hannah, architect, Kelly-street,

THURSO.—BUILDING.—The Caithness C.C. are inviting tenders for a new school building at the Miller Institution. The architects are Messrs. Sinclair Macdonald and Son, of Wick and Thurso.

Smoke Abatement.

The fourth annual report of the National Smoke Abatement Society is now issued. It contains a record of an active year's work in every direction in which the harm resulting from smoke may be abated. It is stated that there is considerable scope for the extension of propaganda work along the lines of exhibits. A list of exhibits available will be sent upon request to the general secretary, 23, King-street, Manchester.

BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for Building Industry. The bricklayers in the Glasgow district have ½d. per hour extra. Painters, by ruling of the Scottish National Painters' and Decorators' Joint Council, have from January 1 new rates. Grade A towns, 1/6 per hour; Grade B, 1/5; Grade C, 1/4; Aberdeen has a special rate of 1/5½. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classifications ...	A	A¹	A²	A³	B	B¹	B²	B³
Craftsmen	1/6	1/6	1/5½	1/5	1/4½	1/4	1/3½	1/3
Labourers	1/2	1/1½	1/1½	1/0½	1/0½	1/-	/11½	/11½

Aberdeen	A	Dundee	A	Hawick	A²	Perth	A
Airdrie	A	Dunfermline	A	Helensburgh	A	Perthshire	A
Alexandria	A	Dunoon	A	Inverness	B	Peterhead	A
Arbroath	A³	East Lothian	A	Kilmarnock	A	Renfrewshire	A
Ayrshire	A	Edinburgh	A	Kincardineshire	A²	Rothesay	A
Bathgate	A	Falkirk	A	Kinross-shire	A	Roxburghshire	A²
Bo'ness	A	Forfarshire	A³	Kirkcaldy	A	St. Andrews	A
Broughty Ferry	A	Fort William	A	Lanarkshire	A	Selkirkshire	A
Clackmannanshire	A	Galashiels	A³	Leith	A	Stirling	A
Coatbridge	A	Glasgow	A	Midlothian	A	Stirlingshire, West	A
Dumbartonshire	A	Greenock	A	Motherwell	A	West Lothian	A
Dumfries	A³	Hamilton	A	Peebleshire	A²	Wishaw	A
Dumfriesshire	A³						

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 883.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	8	9
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	3
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

Portland cement concrete in foundations 1 to 6	per yard cube	24	3
Add if in underpinning in short lengths	" "	5	6
Add if in floors 6 in. thick	" "	2	3
Add if in beams	" "	2	9
Add if aggregate 1 : 2 : 4	" "	9	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	27	0	0
Add if in stocks	"	7	0	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	5	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1¼

POINTING

Neat flat struck or weathered joint	"	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	0	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	0	11
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	0

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	9
York stone sills fixed	" "	22	0
Bath stone and all labour fixed	" "	10	6
Beer stone and all labour fixed	" "	15	0
Portland stone fixed	" "	17	6
Chilmark stone fixed complete	"	16	6

SLATER.

Welsh 16in. × 8 in. 3 in. lap. including nails	per square	72	9	
Do. 20 in × 10 in. Do. Do.	"	80	9	
Do. 24in. × 12in. Do. Do.	"	90	0	

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	4	0	
Do. joists	" "	4	6	
Do. roofs, floors and partitions	" "	5	0	
Do. trusses	" "	7	3	

		¾"	1"	1¼"	2"
Deal rough close boarding	per sq.	30/-	35/-	43/-	70/-

Flat centering for concrete floor, including struts or hangers	"	50	0	
Do. to beams	per ft. sup.	0	9	
Centre for arches	"	1	6	
Gutter boards and bearers	"	1	0	

FLOORING.

		¾"	1"	1¼"	1½"
Deal-edges shot	per sq.	—	38/-	45/-	52/-
Do. tongued and grooved	"	—	43/-	50/-	58/-
Do. matchings	"	40/-	45/-	—	—
Moulded skirtings, including backings and grounds	per ft. sup.	1/4	1/7	1/9	2/3

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights, average size		3	6

DOORS.

		1½"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/3	2/5
Four-panel Do.	"	2/4	2/6	2/9
Two-panel moulded both sides	"	2/6	2/9	2/11
Four-panel Do. Do.	"	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	12	6

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/2	1/4	1/7
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

		1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets		2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed		1/8	2/-	2/2	2/8	—

Housings for steps and risers	each	0	11	
Deal balusters, 1 in. x 1¼ in.	per ft. run	0	9	
Mahogany handrail, average 3 in. x 3 in.	" "	6	0	
Add if ramped	" "	12	0	
Add if wreathed	" "	24	0	

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	0
Plain compound girders	"	18	0
Do. stanchions	"	20	9
In roofwork	"	26	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/-	1/1	1/3	1/6
Ogee Do. Do.	"	1/2	1/3	1/9	2/3
Rain-water pipes with ears	"	1/3	1/10	—	—
Extra for shoes and bends	each	2/9	3/11	—	—
Do. stopped ends	"	1/1	1/4	1/9	2/6
Do. nozzles for inlets	"	2/2	2/7	3/7	4/-

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	38	0
Do. do. flats	"	37	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste pipe	ft. run	1½	1/4	1/6½	2/5	2/8	—
Do. service	"	1/3	1/9	2/-	3/-	—	—
Do. soil	"	—	—	—	—	—	5/9
Bends in lead pipe	each	—	—	—	—	2/6	6/-
Soldered stop ends	"	0/9	1/1	1/6	2/3	2/10	—
Red lead joints	"	0/10	0/11	1/2	1/9	2/1	4/3
Wiped soldered joints	"	2/3	2/9	3/0	3/10	4/10	6/9
Lead traps and cleaning screws	"	—	—	—	10/6	14/-	—
Bib cocks and joints	"	6/4	9/7	14/-	—	—	—
Stop cocks and joints	"	12/4	14/2	20/8	54/-	—	—

PLASTERER.

Render, float and set in lime and hair	per yard sup.	2	0	
Do. Do. Sirapite	" "	2	3	
Do. Do. Keen's	" "	3	0	
Add saw lathing	" "	1	4	
Add metal lathing	" "	2	4	
(Not including hangers or runners, etc., for suspended ceilings.)				
Portland cement screed	" "	2	2	
Do. plain face	" "	3	3	
Mouldings in plaster	per 1 girth	0	1½	
One-and-a-half granolithic pavings	per yard sup.	4	6	

GLAZIER.

21-oz. sheet plain	per foot sup.	0	6½	
26-oz. Do.	" "	0	7½	
Obscured sheet	" "	0	8	
⅛-in. rolled plate	"	0	9	
¼-in. rough rolled or cast plate	" "	0	10	
¼-in. wired cast plate	" "	1	1	

PAINTER.

Preparing and distempering, 2 coats	per yard sup.	0	9	
Knotting and priming	" "	0	7	
Plain painting, 1 coat	" "	0	9	
Do. 2 coats	" "	1	2	
Do. 3 coats	" "	1	9	
Do. 4 coats	" "	2	4	
Graining	" "	2	3	
Varnishing twice	" "	1	9	
Sizing	" "	0	3	
Flatting	" "	0	7	
Enamel	" "	1	1	
Wax polishing	per foot sup.	0	6	
French polishing	" "	1	3	
Preparing for and hanging paper	per piece 2/- to 4/-			

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modifications.*
¶ Denotes *accepted by H.M. Government Departments.*

Aberdeen.—Widening of Bedford-road bridge, for the T.C.:—

*W. Tawse, Ltd., Aberdeen £5,360

Ayr.—36 houses at Elba and James-streets, for the T.C. Mr. William Cowie, architect and quantity surveyor, 5, Wellington-square:—

Excavation, brick and mason—*T. McWhirter, Prestwick.
Cement—*Glen & Galbraith, Ayr.
Joinery, carpentry and ironmongery — *W. Paton & Sons, Ltd., Ayr.
Painter—*M. & M. Paton, Ayr.
Electrical fittings and installation—*Daroch & Elepie, Glasgow.
Glazing—*J. Thom, Ayr.
Plumber—*T. Porter & Sons (Glasgow), Ltd., Glasgow.
Plaster—*Glen & Galbraith, Ayr.
Slater—*A. Ballantyne, Ayr.

Beckenham.—Portable building at Marian Vian school, for the U.D.C.:—

Peter Bros., Edgware	£1,875	0
Vivian'e (Hounslow), Ltd., Hounslow	1,350	0
J. Harrison & Co.	785	10
Burnand & Pickett, Ltd., Wallington	759	0
W. Harbrow, Ltd.	747	0
R. W. Johnson	737	0
W. J. Cearns, Ltd.	700	0
Humphreys, Ltd.	699	0
T. Graham & Co., Beckenham	697	0
*Harrison Smith Buildings, Ltd., Birmingham	656	10

(Subject to M.H. approval.)
(Remainder of London.)

Blackburn.—Additions to the works, for the British Northrop Loom Co., Ltd., Daisyfield. Messrs. H. S. Fairhurst & Son, F.R.I.B.A., architects, 56, Brown-street:—

Builders—*J. Gerrard & Sons, Swinton.
Steelwork—*J. Booth & Sons, Bolton.

Birmingham.—Extensions to factory premises, for Messrs. Electric Heating & Hardware, Ltd., Birchfield-rd., Perry Bar:—

*W. J. Whittall & Sons, Ltd., Birmingham.

Birmingham.—Extensions and additions to branch factory premises in Wharfdale-road, Tyseley, for the Slumberland Crown Bedding Co., Ltd., Charles Henry-street, Balsall Heath. Mr. F. Lloyd Ward, A.R.I.B.A., architect, 35, Newhall-street:—

*J. Smith & Sons, Birmingham.
(Estimated cost £4,000.)

Bolton-on-Dearne.—Elementary Council school, for the West Riding E.C. Mr. W. Wormald, architect, County Hall, Wakefield:—

*J. Horkin, Spenborough.

Carlisle.—'Bus garage in Lowther-street, for the Ribble Motor Services, Ltd., Frenchwood, Preston. Mr. C. D. Quinn, A.R.I.B.A., architect, Frenchwood Offices, Preston:—

Steelwork—*Robinson & Kershaw, Ltd., Manchester.
Demolition work—*J. Millar, Carlisle.

Chesterfield.—Electrical installation at the Children's Home, for the Derbyshire Public Assistance Committee. County Architect, County Offices, Derby:—

*Davis Myer & Co., Ltd., Paddington-street, London.

Croydon.—Alterations at two cottages in Green-lane, including the provision of bathrooms, for the C.B.:—

*J. Quittenton, Chelsham-road, Warlingham £139 5

Croydon.—For Carlton-avenue sub-station, for the C.B.:—

J. & C. Bowyer, Ltd.	£471	0
C. H. Gibson	463	0
J. Smith & Sons, Ltd.	458	0
E. H. Smith, Ltd.	452	0
D. Waller	426	0
Truett & Steel, Ltd.	425	0
Grace & Marsh, Ltd.	413	0
R. W. Johnson	410	0
*F. Liley & Sons	343	10

Croydon.—Extension to sub-station in Oakfield-road, for the C.B.:—

F. Liley & Sons	£229
J. Smith & Sons (Norwood), Ltd.	215
Grace & Marsh, Ltd.	210
D. Waller	208
Truett & Steel, Ltd.	200
R. W. Johnson	198
J. & C. Bowyer	196
*E. H. Smith, Ltd.	193

Doncaster.—Alterations and additions to the public library in St. George-gate, for the Corporation. Mr. R. E. Ford, estates surveyor, 3, Priory-place:—

*Hemeworth Bros., Ravensworth-road, Doncaster £2,950 1 6

Dover.—Pithead baths at the Snowdown Colliery, for the Miners' Welfare Committee. J. H. Forshaw, architect:—

*Welwyn Builders, Ltd., Welwyn Garden City £21.274

Ealing.—Erection of Greenford library, for the T.C.:—

		Extra for Oak.
Streck & Co., Ltd.	£8,299	£256
Stewart & Co.	7,989	75
S. E. Moss & Sons	7,837	110
W. A. Barton & Co.	7,720	93
F. Millman, Ltd.	7,633	94
Buckingham & Sons	7,617	47
A. & B. Hanson, Ltd.	7,600	90
W. J. Dickens	7,600	100
A. Roberts & Co., Ltd.	7,583	76
Perry's (Ealing), Ltd.	7,512	100
E. Mills	7,472	75
F. Liley & Co.	7,447	56
F. D. Hidden, Ltd.	7,318	80
J. & R. Thompson (London), Ltd.	7,281	79
A. C. Dean	7,128	47
London Construction Co.	7,093	75
*Evan Thomas & Sons	6,996	78

Ealing.—Extension to the Hanwell library, for the T.C.:—

A. & B Hanson, Ltd.	£994
E. Mills	942
F. D. Hidden & Co., Ltd.	924
A. Roberts & Co.	761
Streck & Co.	753
A. C. Dean	700
F. Liley & Sons	677
T. Millman & Co.	655
E. Thomas & Sons	640
W. J. Dickens	609
*Stewart & Co., Whitton	590

Ealing.—Reconstruction of St. John's Schools, for the T.C.:—

A. F. Winter & Son, Harpenden	£7.361
S. E. Moss & Sons, Chelmsford	7,029
C. G. Penberthy	6,989
A. E. Brown	6,968
T. Millman, Ltd.	6,845
G. Holland & Sons	6,838
Evan Thomas & Sons	6,472
White & Johnson, Ltd.	6,448
Buckingham & Sons	6,300
Walker (Tooting), Ltd.	6,260
W. S. Barton & Co.	6,074
A. Roberts & Co., Ltd.	6,040
C. Berger & Co	5,997
W. J. Dickens	5,920
F. D. Hidden & Co., Ltd., Brentford	5,920
‡A. & B. Hanson, Ltd., Southall	5,818

(Remainder of London.)

THE CUMBERLAND HOTEL

MARBLE & QUARZITE

JOHN STUBBS & SONS

Ealing.—Three houses in Murray-road, for the T.C.—

W. Ward, Perry & Son	£1,719
W. J. Dickens	1,459
Evan Thomas & Sons	1,400
*T. Millman, Ltd.	1,340

Edmonton.—New road and sewers. Messrs. H. Seymour Couchman & Sons, architects, 520, High-road, Tottenham:—

George Wimpey	£1,290	0	0
Ernest Knifton, Ltd.	1,215	0	0
Constable Hart	1,170	2	0
*T. A. Rainbow, Southgate	1,103	15	6

(All of London.)

Exeter.—Bridge over the Honiton-road on Exeter by-pass road, including section of road:—

*Staverton Builders, Ltd. £70,844

Fraserburgh.—Room at the Manual school for the Aberdeen County E.C. Mr. G. M. Hay, F.R.I.B.A., architect, 177, Union-street, Abedeen:—

Mason—*A. S. Cheyne, Strichen.
Steel—*Lambhill Iron Works, Glasgow.
Carpenter and joiner—*Geo. C. Cassie, Cairnbulg.
Slater—*Geo. L. Greig, Fraserburgh.
Plumber—*John T. Craig, Maud.
Plasterer—*A. Wiseman & Son, Fraserburgh.

Glasgow.—Renovations to Kebbie Palace, in Botanic Gardens, for the T.C.:—

*Cosmos Decorators (Cosmos Studios, Ltd., prop.), 218, West Regent-street, Glasgow £420 3

Glasgow.—Electrical installation at Broomloan-road housing scheme, for the T.C. Mr. William McNab, Housing Architect:—

*R. J. MacIntyre, 168, Darnley-street, Pollockshields, Glasgow £1,961 7 2

Haworth.—Alterations and additions to the cookery room at the Council School, for the West Riding E.C. Mr. H. Wormald, A.R.I.B.A., County Architect, Wakefield:—

*J. Longstaffe & Sons, Keighley.

Hillingdon.—Additional accommodation at the County Hospital, for the Middlesex C.C.:—

Y. J. Lovell & Son	£548
Sims & Russell	490
Fassnidge & Sons, Ltd.	456
F. D. Hidden & Co., Ltd.	453
L. & W. Whitehead, Ltd.	446
*W. S. Try, Uxbridge	370

Hillingdon.—Heating work at the nurses' home extension at the County Hospital, for the Middlesex C.C.:—

Brightside Foundry & Engineering Co., Ltd.	£1,768	0	
Fretwell Heating Co., Ltd.	1,623	0	
G. N. Haden & Sons, Ltd.	1,442	0	
Heath & Co.	1,375	0	
Comyn Ching & Co., Ltd.	1,367	10	
*W. N. Mann & Co., Ltd.	1,339	0	

Isleworth.—Garage at West Middlesex County Hospital, for the Middlesex C.C.:—

F. A. Norris & Co., Ltd.	£196
Wilmer & Sons, Ltd.	133
*Clark, Hunt & Co., Ltd.	120

Kidderminster.—Extensions to the Co-operative café in Oxford-street, for the Industrial Co-operative Society, Ltd., Oxford-street. Messrs. Gething & Rolley, A.R.I.B.A., architects, Kingsley Hall, Vicar-street:—

*Lacey Bros., Ltd., Kidderminster.

Kintore.—Ten three-roomed houses and two four-roomed houses, for the T.C. Messrs. A. Marshall Mackenzie, Son & George, architects, Aberdeen:—

Mason—*A. Low, Newmachar.
Carpenter—*W. Bruce, Ellon.
Plasterer—*P. MacPherson, Inverurie.
Slater—*C. MacDonald, Dyce.
Plumbers—*J. Laing & Son, Inverurie.
Painter—*G. Sangster, Inverurie.
Electric work—*A. McKobb, Ltd., Aberdeen.

Kirkcaldy.—For the Dysart housing scheme, for the T.C:—

Brickwork—			
*W. Arnott, M'Leod & Co., Ltd.	£9,755	0	3
Joiner work—			
*Sheet & Co., Dunfermline	7,083	0	0
Plumber work—			
*A. Thomson, Dunfermline	3,416	5	7
Plaster work—			
*A. Birrell, Kirkcaldy	1,945	3	7
Painter work—			
*I. Campbell, Bo'ness	503	6	3½
Glazier work—			
*G. Miller, Arbroath	177	9	1
Electrical fittings—			
*Miller & Stables, Dunfermline	377	7	2

Knaresborough.—Alterations and additions at Kingsdowne, Ripley-road. Messrs. Kitson, Parish, Ledgard & Pyman, architects, Lloyds Bank-chambers, Vicar-lane, Leeds:—

*Kershaw & Hill.

Leasowe.—Erection of "Travelling Rest" Hotel in Reeds-lane, for Messrs. Yates' Castle Brewery, Ltd., 76, Hamilton-street, Birkenhead. Messrs. Rees & Holt, FF.R.I.B.A., architects, 64, Rodney-street, Liverpool:—

*J. A. Milestone & Sons, Wallasey.
(Estimated cost £10,000.)

Liverpool.—School building and fittings, for the E.C.:—

Ashfield Council School Page Moss-lane—	
‡R. Wearing & Sons	£18,330
Dovecot Senior School—	
‡J. Williams (Liverpool), Ltd.	12,774
Dovecot Junior School—	
‡J. Williams (Liverpool), Ltd.	12,774

Liverpool.—Hotel in Stanley and Merton-roads, Bootle, for Messrs. Threlfall's Brewery Co., Ltd., 21, Trueman-street. Messrs. Medcalf & Medcalf, FF.R.I.B.A., architects, 3, Stanley-street:—

*Parker Bros. (Wavertree), Ltd., Liverpool.
(Estimated cost £13,500.)

***London.**—The following works contracts have been placed by the War Office during the week ended November 23:—

Larkhill—artificers' work—A. E. Guest, Ltd., London, N.W.
Belfast—new bath house—Wm. Dowling, Ltd., Belfast.
Shorncliffe—barrack blocks.—Anglo-Scottish Construction Co., Ltd., London, S.W.

London.—Alterations for additional dressing accommodation at the Broad-street swimming baths, for the Holborn B.C.:—

F. J. Strutt & Sons	£294
H. J. Glew	274
W. F. Fearman	256
Senecal, Ltd.	251
*Whitbys, Ltd., 28, Eagle-street, W.C.1	166

***London.**—Tenders accepted by H.M.O.W. for the week ended November 23:—

Mount Pleasant Letter Office (Fittings Contract No. 8)—extension of racks and benches—J. Greenwood, Ltd., 12-14, Arthur-street, London Bridge, S.E.
Ministry of Labour Training Camp, Hamsterley, Co. Durham—huts—F. Kawnsley & Co., Prospect Works, Town End, Bramley, Leeds.
Manchester Telephone Exchange — asbestos spray material—Newalls Acoustic Products, Ltd., Midland Works, Armley, Leeds.
Evesham, Worcs—Post Office garage—erection—T. F. Howells, Ltd., 83, Bartlett-street, Caerphilly.
Kensington-gardens refreshment pavilion—erection—Galbraith Bros., Ltd., 71, Waterloo-street, Camberwell, S.E.5.
Whitchurch Telephone Repeater Station—erection—Higgs & Hill, Ltd., Crown Works, South Lambeth-road, S.W.8.
King's Lynn Telephone Exchange and engineering garage—foundation work—J. Cracknell, Ltd., Huntley-grove, Peterborough.
British Museum—steel shelving—Roneo, Ltd., 5/11, Holborn, E.C.1.
Writing tables—Wake & Dean, Ltd., Yatton, near Bristol.
Writing tables—H. H. Martyn & Co., Ltd., Sunningend Works, Cheltenham.

London.—Nine dwellings at 23, 25 and 27, Old Gravel-lane, for the Stepney B.C. Mr. Bernard J. Belsher, F.R.I.B.A., Borough Engineer and Surveyor, architect:—

Thomas & Edge, Ltd.	£5,640
Eastern Construction Co.	5,392
J. Jarvis & Sons, Ltd.	5,225
*Gee, Walker & Slater, 32, St. James's-street, S.W.1	5,140

(Architect's estimate £5,085.)
(All of London.)

London.—Three new cottages at 31, Church-row, E.14, for the Stepney B.C. Mr. Bernard J. Belsher, F.R.I.B.A., Borough Engineer and Surveyor, architect:—

Thomas & Edge, Ltd.	£1,850
Eastern Construction Co.	1,650
Gee, Walker & Slater, Ltd.	1,550
J. Jarvis & Sons, Ltd.	1,545
*R. Woollaston & Co., 40, Turner's-road, E.14	1,440

(Architect's estimate £1,240.)
(All of London.)

London.—Cleaning and painting, Ensham elementary schools, S.W., for the L.C.C.:—

	(A)	(B)
Cook & Co., Ltd.	£2,423	£2,493
Speechley & Smith	1,590	—
William Lowe & Son, Ltd.	1,531	—
H. S. Lee, Ltd.	1,390	—
J. Potterton & Sons	1,349	—
Chas. Savers & Son	1,310	—
Hudson Bros. (Builders), Ltd.	1,294	—
Triggs & Co., Ltd.	1,166	1,190
W. F. Goodchild, 192, Trinity-road, S.W.17	1,140	*1,165

Alternative tenders for interior work being carried out (A) between 18th December, and 6th January, inclusive; and (B) 22nd December, and 6th January, 1934, inclusive.
(Architect's estimate: £1,145.)
(All of London.)

London.—Provision of an ante-natal clinic at Dulwich Hospital, for the L.C.C.:—

		Empire timber.
Bostels, Ltd.	£1,326	£1,338
A. C. Brown & Son, Ltd.	1,249	No variation
T. Brown & Son (Herne Hill), Ltd.	1,197	do.
Andrew Black and Son	1,173	do.
H. W. Spinks, Ltd.	1,169	do.
F. Rutter & Son	1,157	do.
H. T. Oliver & Sons, Ltd.	1,150	do.
Triggs & Co., Ltd.	1,148	do.
W. J. Dixon & Sons	1,136	do.
A. Coldman & Son, Ltd.	1,135	do.
*J. & C. Bowyer, Ltd., Haynes-lane, Upper Norwood, S.E.19	1,067	do.

(Architect's estimate: £1,903.)
(All of London.)

London.—New factory in Frampton-road, Leyton, E., for Messrs. Chissick & Kirshenstein, Ltd. Messrs. Burnett & Eprile, FF.R.I.B.A., architects, 107, Jermyn-street, S.W.1. Mr. W. S. Walder, F.S.I., quantity surveyor, 92, Victoria-street, S.W.1:—

Jarvis & Son, Ltd.	£16,261
Higgs & Hill, Ltd.	15,400
W. Shurmur & Sons	15,147
John Laing & Sons	15,079
J. T. Luton & Son, Ltd.	14,789
*Commercial Structures, Ltd., 61, City-road, E.C.1	14,592

London.—Barbed wire fencing works at the Council's new burial ground, Mill Hill, Hendon, N.W.6, for the Paddington B.C.:—

*Astolat Co., Ltd., Peasmarsh, Guildford	151 7 6

Looe.—20 houses at Polvellan, for the U.D.C.:—
*J. Dennis & Son, Braunton £7,000

Luton.—Canteen, for Messrs. Vauxhall Motors, Ltd. Messrs. E. Howard & Partners, F.S.I., F.R.I.B.A., architects, 3, St. James's-street, S.W.1:—
*E. A. Roome & Co., Ltd., Hackney, E.9.

Middlesex.—Contract M.3, for Mogden purification works, for the C.C.:—

H. G. Dyke	£670,697 0 0
Balfour, Beatty & Co., Ltd.	656,610 7 6
Paterson & Dickinson, Ltd.	656,351 5 2
W. Scott & Middleton, Ltd.	636,303 6 2
Melville, Dundas & Whitson, Ltd.	605,290 1 4
G. P. Trentham, Ltd. Hillingdon	578,182 15 5
Bolton & Lakin, Ltd., Birmingham	574,295 11 3
C. Brand & Son	568,297 13 7
Holland & Hannen & Cubitts, Ltd.	565,000 0 0
Gray's Ferro-Concrete Co., Ltd.	552,473 0 8
Cleveland Bridge and Engineering Co., Ltd., Isleworth	545,505 5 2
Shanks & McEwan, Ltd., Glasgow	537,731 15 5
Sir Lindsay Parkinson & Co., Ltd.	537,538 0 0
A. Waddington & Son	537,384 10 0
Mitchell Bros., Sons & Co., Ltd.	537,309 0 1
E. Nuttall, Sons & Co. and J. Mowlem & Co. (Joint), Ltd.	529,737 13 5
Peter Lind & Co., Ltd.	525,102 8 7
H. Arnold & Son, Ltd., Doncaster	521,663 0 0
W. Moss & Sons, Ltd.	517,597 4 10
J. H. Lobb, Penzance	495,518 17 3
W. & C. French, Ltd., Buckhurst Hill	492 322 3 4
‡Sir Robert McAlpine & Sons, (London), Ltd.	482,946 18 8

(Remainder of London.)

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Middlesex.—Construction of puddle wall at Perry Oaks in connection with the West Middlesex drainage scheme, for the C.C.:—

Hussey, Egan & Pickmere, Ltd., Birmingham	£77,808 10 0
J. L. Eve Construction Co., Ltd.	77,554 2 3
J. Shelbourne & Co., Ltd.	65,127 3 6
W. & C. French, Ltd., Buckhurst Hill	60,871 18 10
Hodgsons, Ltd., Nottingham	60,376 13 4
H. Holbrow, Ltd., Slough	59,062 5 10
Caffin & Co.	58,972 13 2
J. Gill	55,021 8 0
E. Nuttall, Sons & Co. and J. Mowlem & Co. (Joint), Ltd.	53,059 6 2
Mitchell Bros., Sons & Co., Ltd.	51,728 11 0
Sir Robert McAlpine & Sons (London), Ltd.	49,485 9 8
Bolton & Lakin, Birmingham	47,300 9 2
A. Waddington & Son	34,932 13 2
‡Howard Farrow, Ltd.	34,346 16 8

(Remainder of London.)

Middlesex.—Adapting the top floor of the new children's block at the Central Middlesex County Hospital, for the C.C.:—

*Newby Bros., Ltd. £333

Middlewich.—13 houses in Booth-lane, for the U.D.C. Mr. F. W. Stocks, surveyor and water engineer, Victoria-building:—

*Jones & Pugh, Middlewich £3,601

***Mildenhall.**—Heating three buildings, for H.M. Air Ministry:—

*Brightside Foundry & Engineering Co., Ltd., 17, Summer-row, Birmingham.

Neasden.—Repairs and redecorations to 4, Prout-grove as a children's home, for the Middlesex C.C.:—

A. J. Osborne	£155
C. Bastable	138
J. Woollard & Sons	137
G. Bollom & Sons, Ltd.	137
Ferris Bros.	124
*Callow & Wright, Ltd.	120

New Mills.—Reconstruction of premises in Albion-road, for the Britannic Assurance Co., Ltd., Broad-street Corner, Birmingham. Messrs. Cruickshank & Seward, architects, 18, Booth-street, Manchester:—

*J. Wild & Sons (Builders), Ltd., New Mills.

Newcastle-on-Tyne.—New factory in Foundry-lane, for Messrs. Faith, Ltd. Mr. C. S. Errington, architect, 21, Grainger-street West:—

*J. C. Clarkson, 48, Matilda-street, Newcastle.

Newcastle-on-Tyne.—Conversion of premises in Westgate-road and Fengle-street into business premises, for the Northern General Transport Co., Ltd. Mr. A. H. Fennell, architect, Bridge End-chambers, Chester-le-Street:—

External work—*Bewley & Scott, Dunston-on-Tyne.
Internal renovations—*Elliott Bros., Jesmond, Newcastle.

Northallerton.—14 cottages, for the R.D.C.:—
8 cottages—*W. Thompson & Sons, Northallerton.
6 cottages—*J. & G. Buckle, Stockton-on-Tees.

Northam.—Council chamber and offices in Windmill-lane, for the U.D.C. Mr. W. G. Champion, surveyor:—

W. Saunders & Son, South Molton	£1,252 9 1
A. F. Beer	1,153 16 9
A. Griffey	1,150 17 1
Boon Bros.	1,150 12 8
W. Badcock & Son	1,012 9 4
*J. L. Harris, Appledore	1,058 19 7

(Remainder of Northam.)

Peterhead.—New Academy, for the Aberdeenshire C.C. Messrs. George Bennet, Mitchell & Sons, architects, 1, Craibstone-street West, Aberdeen:—

Excavation, brick and mason—*Smith & Son, Peterhead
Slater—*J. Gray, Inverness.
Cement—*Wilson & Bruce, Peterhead.
Plumber—*A. Ross, Aberdeen.
Electricity fittings and installation — *Bell & Robertson, Ltd., Aberdeen.
Joinery, carpentry and ironmongery—*Bruce & Gow, Peterhead.
Glazing work and painting, etc.—*W. Ross, Inverness.
Plaster—*Wilson & Bruce, Peterhead.
Heating engineering—*A. L. Peacock, Dundee.

Saffron Walden.—Six houses at Littlebury, for the R.D.C. Mr. A. E. Pitstow, surveyor, 25, West-road:—

†F. W. Cranwell, Chrishall, Rayston.

Scarborough.—Extensions at the Wessex Private Hotel, 1, Esplanade. Messrs. J. Petch & Sons, architects, 12, Valley Bridge-parade:—

*H. Proctor & Son, Scarborough.

Small Heath.—Alterations to licensed premises at the corner of Greenway-street and Coventry-road, for Messrs. Ansell's Brewery, Ltd., Park Brewery, Aston. Mr. H. Peter Hing, F.R.I.B.A., architect, 121, Colmore-row, Birmingham:—

*E. Garfield, Ltd., Birchfield.
(Estimated cost £3,500.)

Small Heath.—Additions to the public-house, 315, Coventry-road, for Messrs. Ansell's Brewery, Ltd., Park Brewery, Aston. Mr. H. Peter Hing, F.R.I.B.A., architect, 121, Colmore-row., Birmingham:—

*G. T. Stephens & Sons, Sutton Coldfield.
(Estimated cost £4,000.)

Stratford.—Extensions to showrooms in Chesterroad, for Messrs. Hancock & Taylor, Ltd.:—
*Bamford & Pearson, Littleborough.

Swansea.—Additions to the dental and waiting room, etc., at the Clinic in Trinity-place, for the C.B. Mr. E. E. Morgan, F.R.I.B.A., Borough Architect, 3, Prospect-place:—

Joseph Johns	£525	0	0
L. H. Samuel	462	0	0
S. Dowdeswell	398	10	0
John Harris	396	0	0
Charles Tyler	384	0	0
Rodgers & Davies	358	17	2
T. E. F. Whitear, Norton-on-Tees	356	12	9
C. H. Youde	350	0	0
Griffith, Davies & Co.	345	0	0
Darch & Morgan	317	0	0
*Thomas Richards	311	0	0

(Remainder of Swansea.)

Swinton and Pendlebury.—Extensions to the Town Hall and Library, for the U.D.C. Mr. R. Entwistle, surveyor:—
*Direct Labour.

Tottenham.—Underpinning church in West Greenroad. Messrs. H. Seymour Couchman & Sons, architects, 520, High-road, Tottenham:—

J. & R. Thompson	£327	0
F. E. Little	324	0
Newby Bros.	298	0
J. & J. Dean, Leyton	264	9

(All of London.)

Tynemouth.—22 houses in flats on the Pineapple estate. Messrs. F. R. N. Haswell & Sons, architects, 77, Tyne-street, North Shields:—
*Hastie D. Burton, Ltd., King-street. North Shields.

Wallingford.—20 houses at Didcot, for the R.D.C.:—
*Modern Construction Co. £6,223

Wellingborough.—Development of land for aerodrome, club hangar, 8 private hangars, workshops, offices, club room and power control tower, etc., for the Northampton Aero Club. Messrs. J. Brown & A. E. Henson, F. & L.R.I.B.A., architects, 83, St. Giles-street, Northampton:—
*T. Wilson & Sons, Ltd., Northampton.

Wembley.—Reconstruction of East-lane L.M. & S. railway bridge, for the Middlesex C.C.:—

Tee-side Bridge & Engineering Co., Ltd.	£22,337	5	9
Walker Scott & Middleton, Ltd.	21,805	14	2
G. Wimpey & Co.	20,562	3	10
Braithwaite & Co., Engineering, Ltd.	20,032	6	2
Dorman, Long & Co., Ltd.	20,031	7	11
Roads & Public Works, Ltd.	20,007	5	11
Mitchell Bros. & Sons, Ltd.	19,779	13	11
Rubery Owen & Co.	19,462	3	3
E. Nuttall, Sons & Co., and J. Mowlem & Co.	18,956	3	3
A. Jackaman & Son, Ltd.	18,816	12	4
Motherwell Bridge & Engineering Co., Ltd.	18,778	14	10
Horsley Bridge & Engineering Co., Ltd.	18,423	13	6
J. Westwood & Co., Ltd.	18,139	10	5
Sir Wm. Arrol & Co., Ltd.	18,134	17	8½
Logan & Hemingway	17,618	18	8
Butterley Co., Ltd.	17,412	19	3
J. Cochrane & Sons, Ltd.	17,231	6	2
*Caffin & Co., Ltd.	16,691	0	5

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